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The **essential** magazine for Amiga enthusiasts

AMIGA SHOPPER

Issue **59** February 1996 £4.25



Printer Supertest

10 new printers are tested, reviewed and rated in our essential buyers' guide.

Money Matters 4

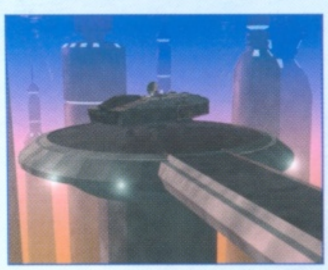
Plus much more – see back cover

A full 5Mb!

The main event!

Cinema 4D and Imagine 4 head-to-head inside!

Shopper**Features**



- Amateur film makers LightworX turn professional using the Amiga and LightWave.
- At last, we bring you a comprehensive guide to the Amiga's Shell that everyone can understand.
- Asim CDFS 3: Is this the ultimate set of tools for CD drive owners or an overpriced luxury?
- Xi Paint: The modular paint package finally debuts in the UK released on compact disc!
- F1 Licenceware and Phase 2 CD-ROMs reviewed.

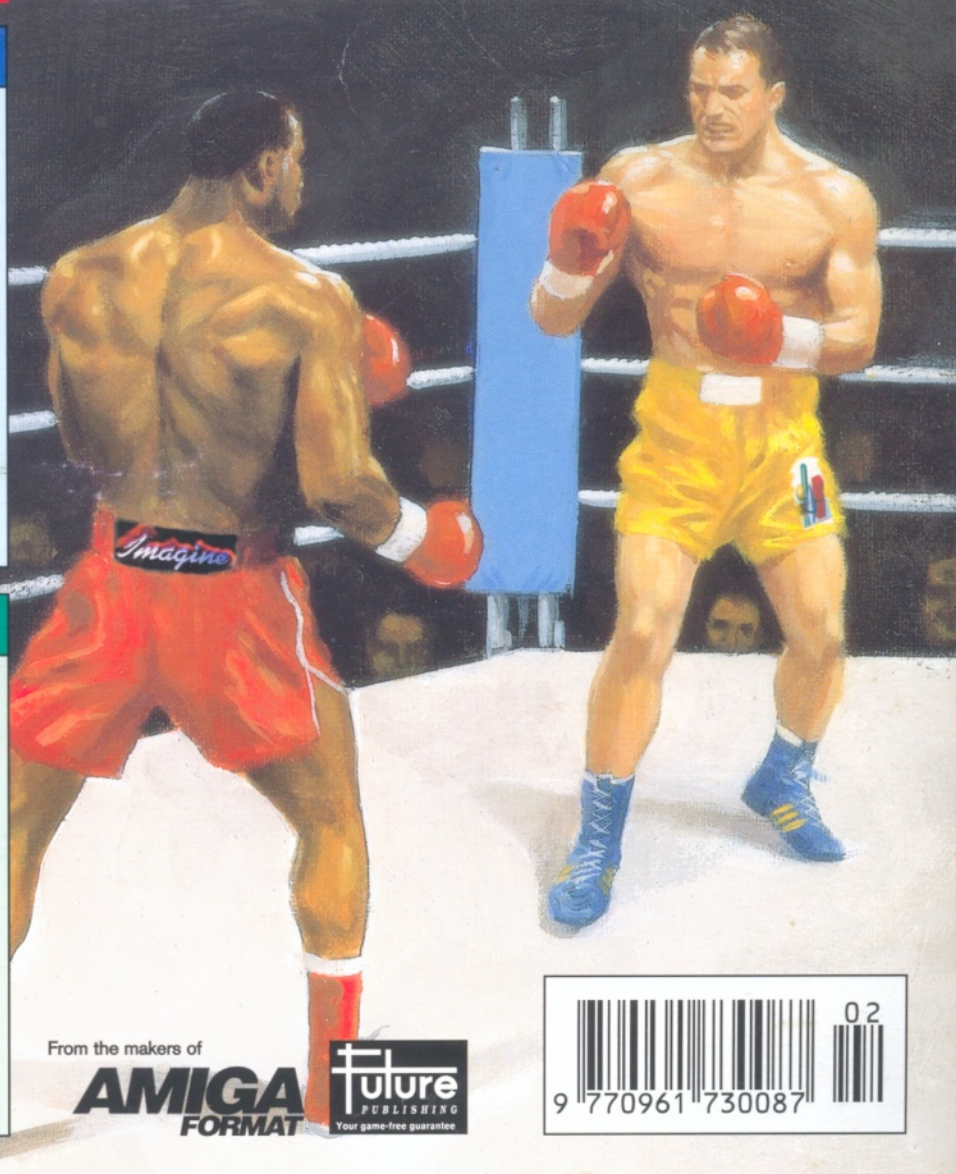
Shopper**Tutorials**

3D
Create your own private universe. All you need is a copy of LightWave and some advice from Mojo.

Comms
Last month we looked at the basics of MIME, now we explain how to customise MIME for any Amiga file type.

DTP
We give you tips on the best ways to print your DTP document. Plus, win the DTP package of your choice!

AMOS
We tell you how to write a complete utility called AS Disker in our AMOS tutorial this month.



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AMIGA SHOPPER

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Inside issue

A4000Ts are in the shops at last and the World Of Amiga Show is planned for April. Good news indeed. There's even talk of a brand new A1200...

Not only are Power PCs on their way (although they may take longer than we would have hoped), but Petro Tyschtschenko has hinted at a new A1200 for early 1996. Plus, the World Of Amiga Show is booked for April. I know we reported that it was in January, but that was the information we were given by Amiga Technologies at the time. Now, however, they have actually booked the venue and there's even a ticket order line – turn to page 14 to find out more.

Meanwhile, we have another stunning issue for you – well, I would say that, wouldn't I?



First up, if you are wondering why we have seashells strewn around throughout the mag, well, David has written a feature on getting to grips with the Amiga's system and using the Shell. I'd like to see *you* try illustrating that one!

Second, we have a Supertest of 10 new printers on the market, the follow-up to the printer Supertest in our July issue. There are some excellent, value for money printers out there. Read what Larry has to say about some of them on page 26.

The reason we have a couple of boxers on our cover becomes clear when you turn to page 36. Cinema 4D is a German 3D package that has been popular over there for ages. Now it has a translation for the UK market. Will it knock Imagine 4 out of the ring?



Then we have a competition for you to try your luck at. Ten lucky readers could win five CD-ROMs each. Just answer the questions on page 46.



I know we're a little short on reviews in this issue, but that's because we had so many other things we wanted to put in – including our printers Supertest which is one big review, really. However, we have a review special planned for next month, with pages and pages on programs like Datastore 2, Ami-Link, AMOS Pro Compiler; and hardware such as a new SyQuest drive and a new hard drive – as much as we can fit in, in fact. Find out what else we will feature on the last page of this issue.



Back to this month, we have another great 3D tutorial from Babylon 5 creator Mojo, plus more on Comms, DTP and AMOS.

Don't forget to book your WOA tickets – we will see you there! ■

Sue Grant
Editor

How to contact Amiga Shopper

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Turn the page for the contents of issue **59**

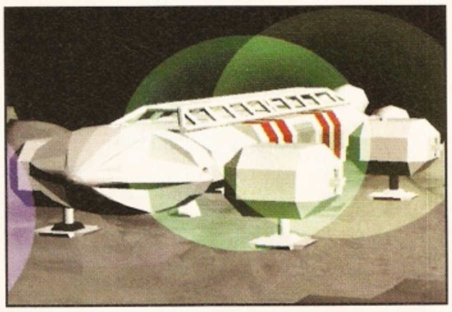
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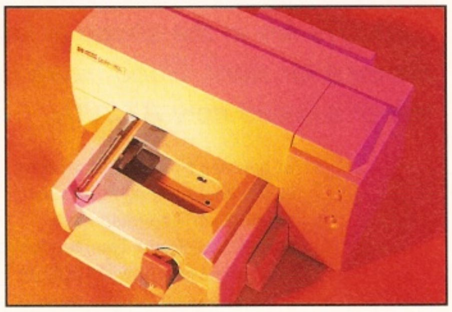
Shopper**Features**



A picture of a seashell. To go with our feature on the Amiga's Shell. Geddit?



The Amiga rendering programs, Cinema 4D and Imagine 4 are reviewed on page 36.



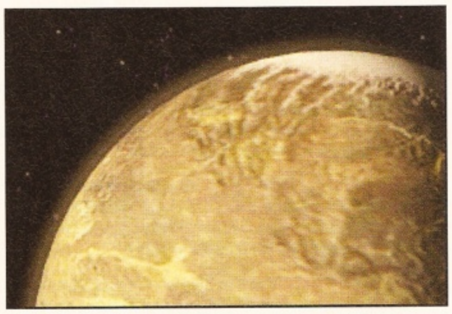
Looking to buy a printer? Turn to page 26 for advice on which one to buy.

Shopper**Reviews**

Shopper**Services**

Shopper**Tutorials**

Shopper**Regulars**

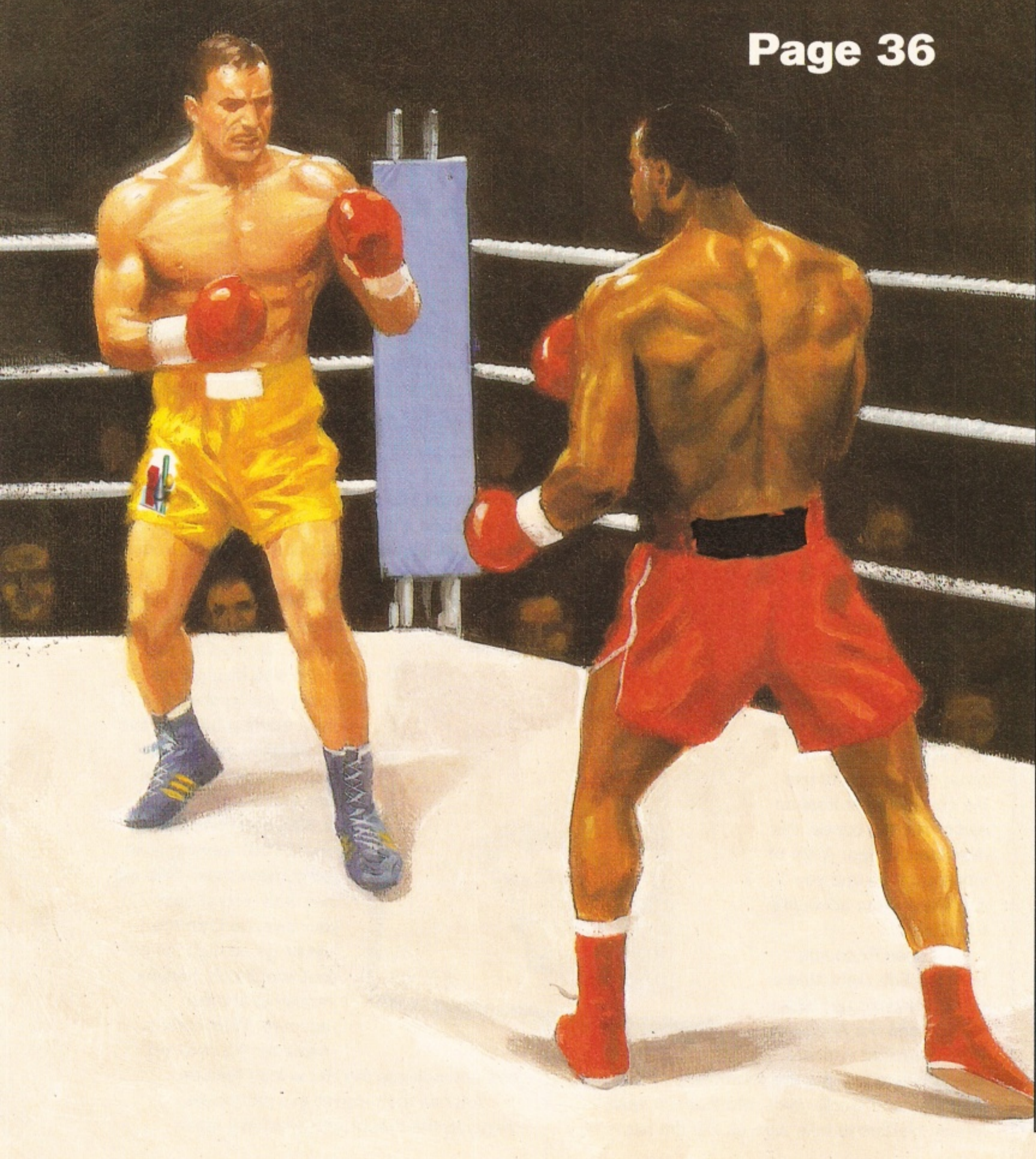


Mojo is back with his 3D tutorial. This month: create your own Universe!

The main event!

Cinema 4D and Imagine 4 fight it out for first place!

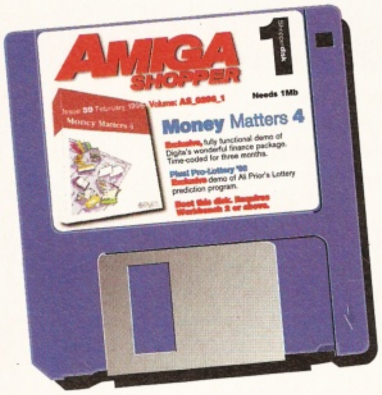
Page 36



Shopper**Disks**

We've done it again! We've found you 5Mb of the most useful programs and utilities around and put them on our two Coverdisks this month:





Money Matters 4

Thanks to new "torture" techniques, we've managed to "acquire" four exclusive programs this month as well as masses of PD and Shareware. To start with, from Digita's new generation of packages, we have Money Matters 4. **David Taylor** *shows you how to start getting your finances into shape.*

Digita have consistently produced high quality software for the Amiga so when we discovered that a new finance package was on the horizon, we camped outside their doors with banners, singing protest songs around fires until they agreed to give us a special version for you. This version is fully functional and is coded to work for three months. If it has won you over by then (31st March 1996), as we're sure it will have, then you can also save £10 off the full version with our exclusive offer which Digita agreed to when we threatened to start singing again.

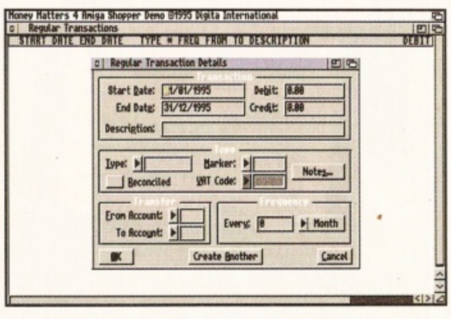
Money Matters 4

The program does need setting up once it has been installed. If you are running from floppy disks, you need a Workbench disk with around 80K free (make a copy of it and delete the utilities drawer, for example) for the necessary libraries to be installed from the Installer icon. If you are using a hard disk, it's easy to install using the Installer script from floppy, but if you installed directly to hard disk from the Coverdisk, you need to make an assign:

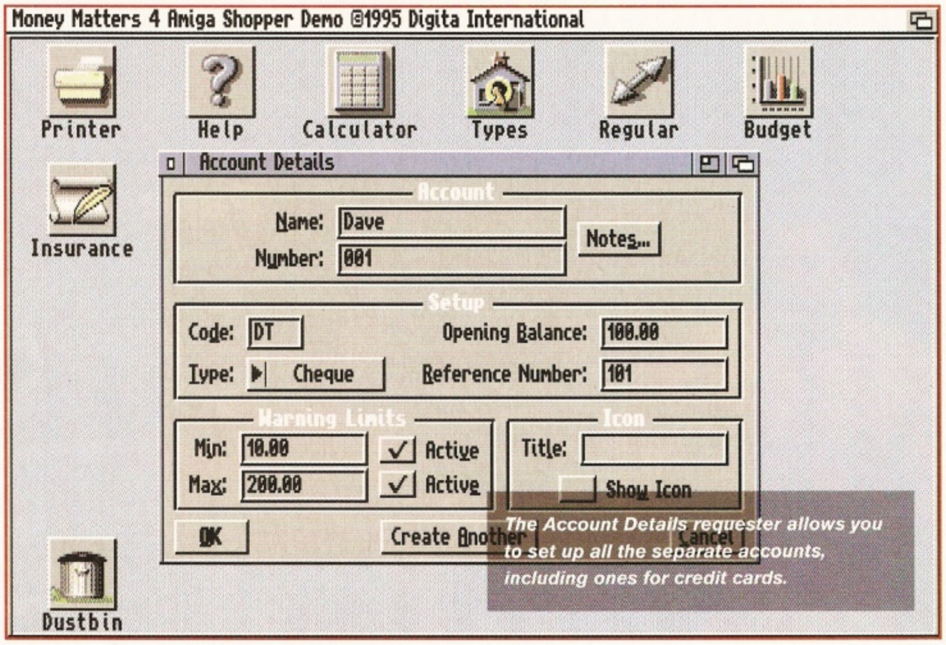
```
assign "Money Matters:" <destination>:<destination>MM4_Demo/.
```

If that sounds difficult, take a look at this month's feature on Shell which explains more about how to do things like that.

Once this is done, all you need to do is load

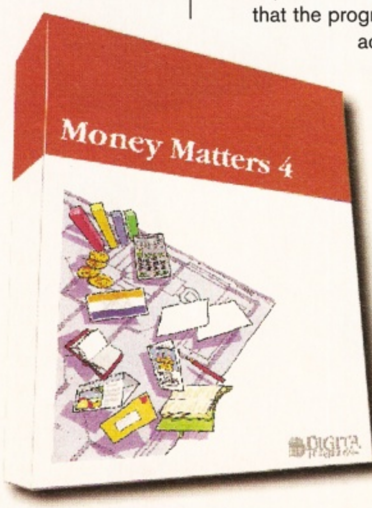


Regular transactions such as direct debits can be set up and if "reconciled" will be applied and affect your balance immediately on the date.



The Account Details requester allows you to set up all the separate accounts, including ones for credit cards.

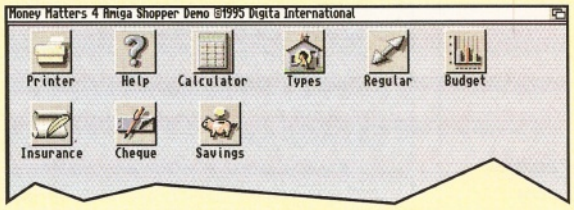
Workbench and double-click on the program icon. When Money Matters loads and you have accepted the details and set the date, you'll be faced with a blank screen, but we can soon change that. Select New from the Project menu. Enter the name you want to give to your data, e.g. Amiga_Shopper. Click on OK and you will be given the chance to use the configuration from an earlier file, but cancel this requester. Bingo! A set of icons appears and you can set up your accounts from here.



Choose Accounts from the Edit menu and a requester pops up; click on Add and the Accounts Details section appears. This is where you put the information about the accounts and credit cards, etc that you wish Money Matters to take care of. Put the name of the account into the name section, like My Cheque and a number for the account. The Code part allows you to enter a two-letter code that the program will use to reference the account from other areas, like budgeting or standing orders. Enter MC for My Cheque. You can also change the account type to cheque and enter a starting balance and the reference number for cheques to start at. Then enter maximum (e.g. £2,000) and minimum (e.g. -£100) warning limits and activate them. This will then warn you should your balance drop too low or go so high (as if!) that you should transfer money to another account. Then enter a name for the desktop icon and activate the Show Icon feature.

You can then repeat this procedure, changing the details until you have made

Money Matters 4 desktop icons



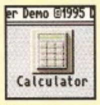
The desktop on Money Matters shows a set of icons which can be used as short-cuts for some of the menu items. They can be arranged as you want them to be.



The Printer Icon is special. Like the Dustbin icon, you drag files and drop them on to it. This prints out the account.



A most useful icon. Press this and the on-line help appears, to solve any problems you may be experiencing.



Guess what! This icon opens a calculator on the desktop so that you can make quick calculations easily.



This allows you to edit the types of transactions which are used for every item you enter to enable you to identify entries.



The Regular icon allows you to adjust or add transactions that occur on a regular basis, such as standing orders.



Money Matters can also help you work out a budget. This icon lets you set an amount to be budgeted out over a year.



A complete guide to your finances can be created including insurance details which are entered using this icon.



An example of the accounts icons. This Cheque account is displayed for viewing and editing from here.



One of the other types of account – savings. There are many more types for every account option.

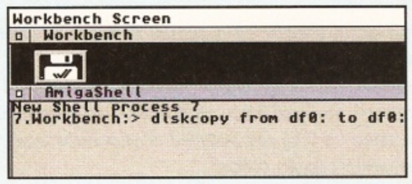
Beginners, look!



Before using either of this month's Coverdisks, please be sure to back them up – just in case. Simply follow the easy instructions below.



1 *Boot up from your Workbench disk or partition, double-click on your Shell icon – to be found in your System Drawer.*



2 *If you only have one disk drive, type in the following line and then press Return.*

```
Diskcopy from DF0: to DF0:
```

If you have two drives, place the Coverdisk in DF0: and a blank in DF1:, then type in this line instead:

```
Diskcopy from DF0: to DF1:
```

3 *Follow the on-screen prompts and remember that the Coverdisk is the source disk and the blank is the destination.*

4 *If you used the two-drive method, remember to rename the copy by clicking on its icon and pressing right-Amiga r.*

5 *If you have two drives, you can also copy the disk from Workbench by dragging the Coverdisk icon over the destination disk's.*

6 *Then place either of the Coverdisks in DF0: and reset the Amiga to boot it. It is best to boot disk 1 (or the Subs disk if you're a subscriber). This will let you install all the disks to either floppy or hard drive.*

entries for each of your accounts and credit cards.

Now enter the types of transactions, which is done by selecting, amazingly, Transaction Types from the View menu. The TRAN type, for transferring funds between accounts, already exists. Select Add Item from the Edit menu and add SAL and then press the Tab key and enter "Salary". Click on Create Another and add all the types of transactions you will make. Digita suggest you add the types that are shown in the Transaction Types box on this page.

You should now set up any regular transactions, such as salary credits and direct debits. Choose Regular Transactions from the View menu and marvel as the Regular Transactions requester appears. In the start date, you should enter the date of the first transaction and the end date. Then enter the amount, either debit or credit. Select the type of transaction, which is what you have just set up, for example SAL for Salary. Select which account the transaction is being made to (and if it is a transfer between accounts, which one it is being made from). Enter the regularity, such as one month for every month or two weeks for fortnightly.

Transaction Types

TYPE	DESCRIPTION
HK	Housekeeping
CL	Clothes
PTRL	Petrol
MISC	Miscellaneous
TAX	Local Tax
CARI	Car Insurance
CARE	Car Expenses
CARL	Car Loan
ENT	Entertainment
CASH	Cash Withdrawals
HOBB	Hobbies and Interests
HOLI	Holidays
CDS	Compact Discs
BCHG	Bank Charges
INT	Interest
GIFT	Gifts

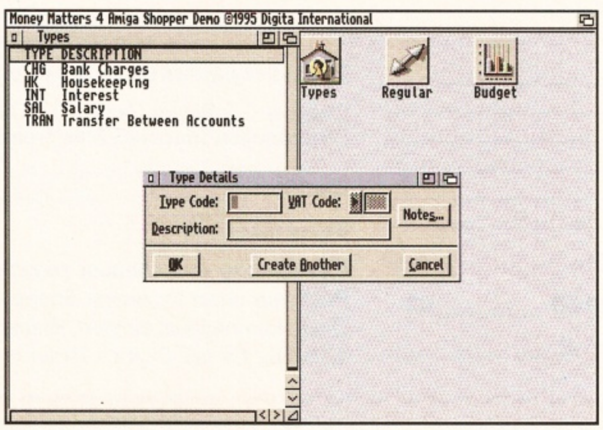
It would now be a good time to save your data, so that all of this is stored permanently. So, select Save from the Project menu.

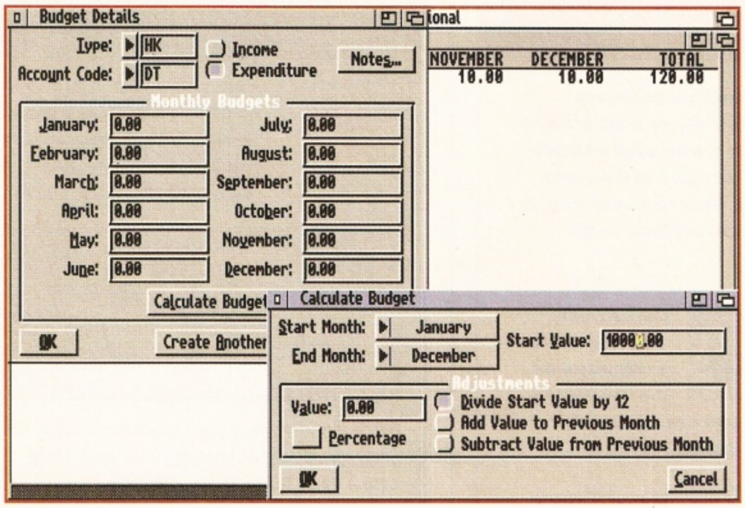
You can now double click on one of the account icons and suddenly you've got a detailed spread of your account with all the regular transactions set up. To add in your own manual transactions, such as that £20 you foolishly took out last Friday on the way from the pub, select Add Item from the Edit menu. Enter the details of the debit or credit and the type and also decide whether it should be "reconciled" or not.

Reconciliation applies to all transactions. It means that the transaction has been applied to your account and can be considered as affecting the balance. This is useful for cheques that may have not yet been cashed or credits

▶ 8

Each transaction has a type so that you can identify them easily. TRAN is the only one that is included so you should enter all the ones you will use. The suggested types are shown in the Transaction Types box above.





Money Matters offers more options than we can possibly detail, like this budgeting one. Don't worry, though, because the on-line help explains it all.

that won't appear for a couple of days. You can still have a record of these items without incorrectly changing your balance. Should you want to, you can force all items to be reconciled as soon as they are entered or reconcile a set between certain dates.

This is the briefest of introductions to help you set up the bare bones of your accounts. Money Matters offers many more features, which are quite intuitive to use, as you can see from using it so far.

You can set up investments so that Money Matters keeps track of any shares or Unit Trusts. It can also generate reports on your finances and display the information either textually or graphically. To make best use of this feature, you'll probably want to customise the program for your printer. This is done from the Printer item on the Change Settings sub-menu which is on the Settings menu.

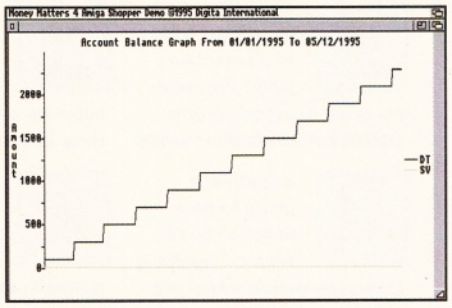
However, there's even better news, because the full on-line help file has been included so you can find out about all the other functions and how to use them by just pressing the Help key. This uses the amigaguide.library which is one of the reasons why you must install Money Matters 4 before using it, unless you already have all the libraries and fonts on your system. ■

Dodgy disk?

To avoid errors when installing to floppies, ensure that your destination disks are of high quality. If an error occurs, try re-booting and using a different spare disk – the majority of errors are caused by faulty destination disks.

If your Coverdisk absolutely refuses to work and you are certain it is faulty, please return it, along with an S.A.E., to:

Amiga Shopper Coverdisk
(insert the name of the disk),
Discopy Labs Ltd., PO Box 21,
Daventry NN11 5BU.



Accounts can have statements printed out, as well as graphs – if only my account actually looked like this, instead of the inverse.

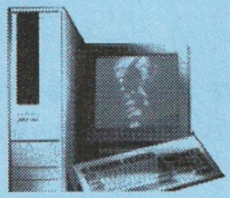
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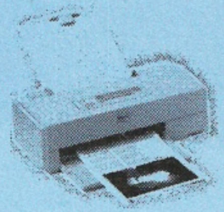
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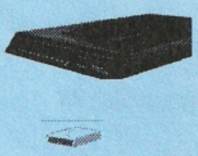


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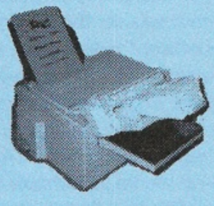


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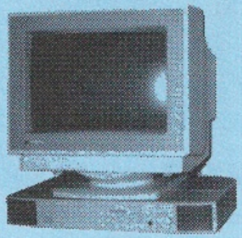
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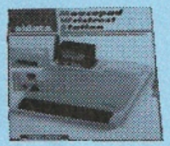
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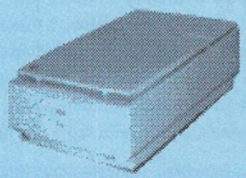
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(We have a lot more planned for the coming months... stay tuned!)

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Shopper Choice

There are three more exclusive programs and some other killer applications and essential utilities on our Coverdisks this month.

Ever wanted to improve your chances on the National Lottery? How about trying out a fun-filled paint package? A new organiser program would probably be useful too. Well, we have secured exclusive versions of all of these this month and we've still made room to pack on QuickFile 3, a database program and the Morse Code Trainer we promised last month. Not bad, but we've also got three superb utilities: the very latest, new-look Virus Checker 8, InterPlay 4 and Icon Convert. That's all without mentioning the programs in the Technical Zone, or the tutorial code for AMOS, or even the popular Information Zone. Yes, it's another crammed set of disks and no mistake.

LicenceWare

This month we have a double treat for you. Back in November 1995 we reviewed Magic Paint Box and gave it a storming 96 per cent. Since then, we have been working with F1 Licenceware to get a demo of the program for you and here it is. Ali Prior has also been producing Star buy-winning software and so we thought it about time that we got you a special version of one of his programs, Pro Lottery 96.

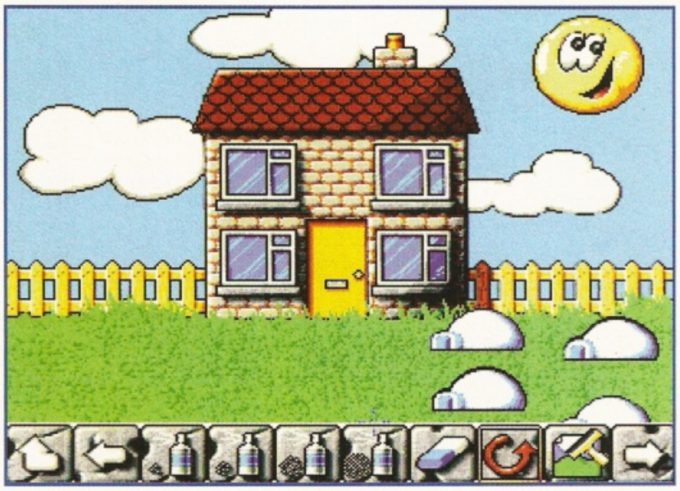
Magic Paint Box

Author: Malcolm Lavery

Magic Paint Box installs to an auto-booting floppy. If you use a hard drive, you may have to install some of the libraries if you don't already have them. The program itself is very simple to use. It's designed for children or those with a complete lack of artistic ability (like myself) who want to be able to produce nice pictures.

The bottom of the screen has a menu, which is detailed in the box over the page, along with the options. You'll find yourself having lots of fun with this package and children will be entertained for hours. The AS office is particularly fond of the grass laying option.

Produce fabulous pictures with little or no artistic talent using Magic Paint Box.

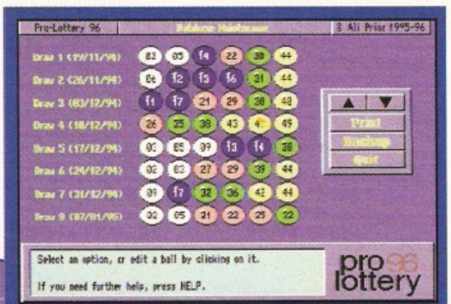


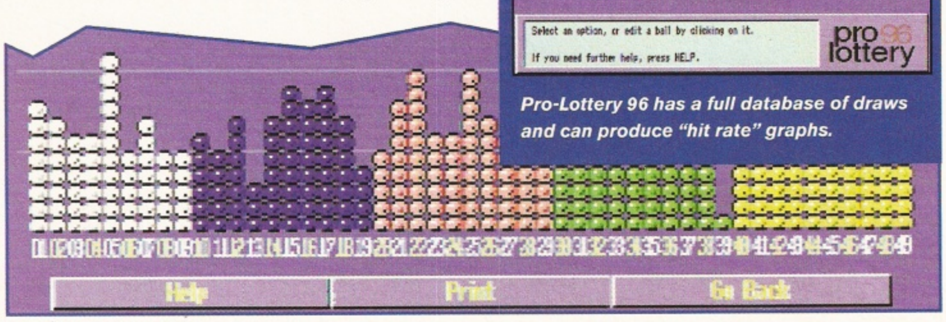
Due to the size of the full program and its built-in clipart and music, some of the options and abilities have been removed and so appear crossed out. To get the full version, contact F1 Licenceware ☎ 01392 493580. It costs just £6.99 and comes with a full, printed manual.

Pro-Lottery 96

Author: Ali Prior

Rather disappointingly, the National Lottery has failed to make me a multi-millionaire yet. Things might change though with the use of this Lottery "predictor" from Ali Prior. From the same stable as the excellent Pro-Football, the program couldn't be easier to use and offers every conceivable option.





Pro-Lottery 96 has a full database of draws and can produce "hit rate" graphs.

The package is installed directly to an auto-booting floppy disk and can be installed to hard drive, if you want, by pressing the F10 key from the main menu. It can still be installed directly to hard drive from the Coverdisk, but like Magic Paint Box, requires some fiddling on your part. Novices are best installing to floppy and letting the program do the hard drive installation.

Because of the nature of the program, you need to update the data for the last few Lottery draws which have taken place between the compilation of the Coverdisks and now. This is easy to do (remember to leave the disk read/writable) and you can get the details of the recent draws from Teletext if you haven't got them. Alternatively, the author has offered to do any for free. All you have to do is send the disk and an SAE to him at the address in the docs.

Once the program is set up, you can look at its accuracy over past draws and ask it to generate a set of numbers (or several sets) according to your wishes, whether these are most-picked numbers, random, related to star signs, etc. You can then store these numbers and print them out. Storing them allows the program to check its accuracy after the draw.

This version of Pro-Lottery 96 is fully functional up until 20th April 1996. After that date, you need the full version which is available from the author at the address in the docs for a special AS price of £10 (the amount of the smallest Lottery win).

Magic Paint Box menu bars





This is the main palette for you to choose the brush colour.



Four background pictures are available for you to use as a basis for your own creations.





The Toolbox offers all these different features for freehand drawing. Try the grass option. It's a real hoot.



The rubber stamp lets you place the built in colour clipart on your basic picture.



The keyboard lets you play some very strange tunes indeed. (It keeps editors entertained.)



The main Magic Paint Box menu provides access to the sub menus. There is a guide to some of them above – the rest should be obvious.

Application**Zone**

In addition to the three applications detailed below, this zone also contains some supplement files for Remdate II, which was included on last month's Coverdisks. These brand new files allow you to update the diary for events in 1996. The supplement needs adding to wherever you store your Remdate.xxx data (typically s:). Remdate will detect it and ask if you want to incorporate it into your file. A new version of Remdate is due by the end of January. Version 2.2 will feature many new options including the ability to import data from other organisers.

Epoch Organiser

Author: Jack Pritchard

Taking an entirely different approach to electronic diaries, Epoch Organiser is the latest program from the highly successful Epoch suite. It is a fully self-contained program and just needs loading – even the on-line help is coded into the program. Not that you'll need any help because the program is so easy to use. You are shown a visual representation of a diary, into which you can make your entries.

There are many different areas to the organiser, including calender, diary, address book, notepad and a time tabler. The menus are activated from icons placed around the side of the screen and clicking on the documentation at the top right of the screen gives you access to the on-line help. Entering the data is simple – just type away, but don't forget to save it!

Amongst the features of Epoch Organiser are detailed searches, printouts and even a calculator. This version has been prepared specially for Amiga Shopper and has a limit on the number of entries, but the documents detail how to get a full version from the author.

QuickFile 3

Author: Alan Wigginton

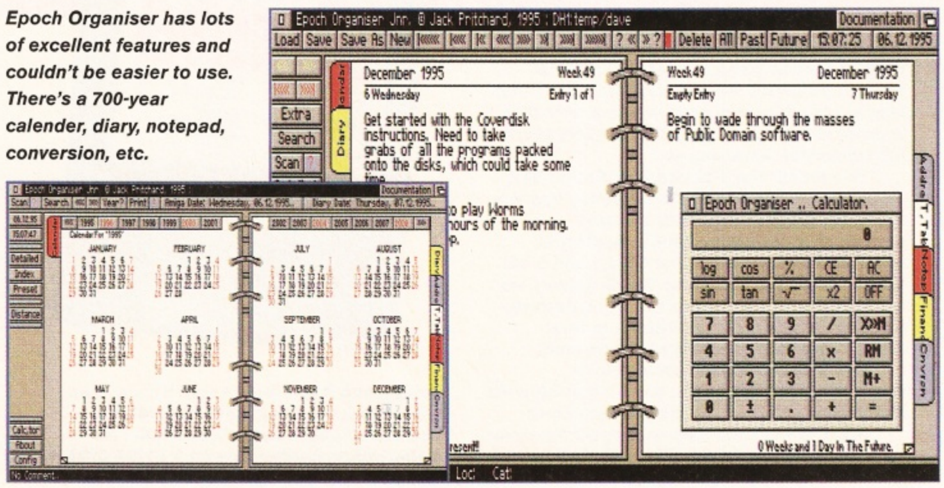
This is another impressive database program that offers a beautiful interface making data entry as easy as possible. Apart from text entry, all the information is set up and entered using the mouse. You can make a database of pictures and QuickFile will even incorporate a preview of them. Text files can be attached to entries and the database can be fully defined.

Shareware notice!

Remember that a number of the programs on these Coverdisks are some form of Shareware. Amiga Shopper has compiled both disks with the help of the authors, who have received no fee from us.

So, if you keep and use these programs, you *must* register. Some people only want a postcard, so *please* put in the effort. They did when they created the program.

Epoch Organiser has lots of excellent features and couldn't be easier to use. There's a 700-year calender, diary, notepad, conversion, etc.



Utility**Zone**

Virus Checker 8.3

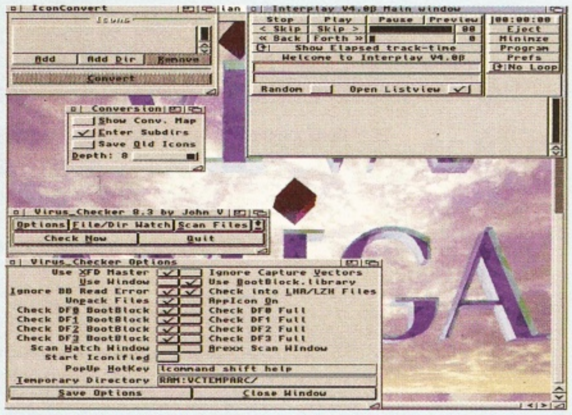
Author: John Veldthuis
Another brand new version of Virus Checker has been published with the bugs fixed from earlier versions. It uses the new bgui.library as John promised in our interview with him in AS57. The new look has a great feel to it and all the features make Virus Checker 8 as indispensable as earlier versions.

InterPlay 4.0b

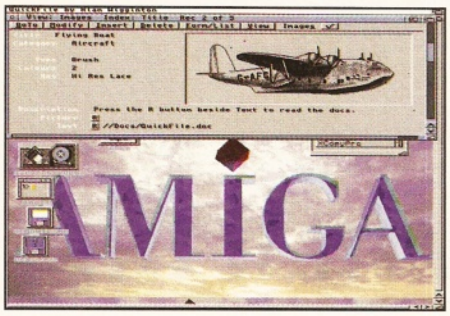
Authors: Stian Olsen/Espen Skog
Fully updated, InterPlay 4 is set to take the laurels as the best audio CD player. It offers more features than any other and scores joint first in our round-up in this month's PD section. Full controls, programming and lists are possible.

Icon Convert

Author: Peter Liljenberg
Icons are the very heart of Workbench, but they can also be a bit of a pain at times. This new utility allows you to alter them easily, stripping down planes and palettes without losing the pictures.



This month's three utilities are indispensable: Virus Checker, InterPlay and Icon Convert. The backdrop picture is by Ashok Katwala.



QuickFile 3 offers an excellent database with the ease of use of point-and-click entry.

There is a full AmigaGuide which details exactly how to use QuickFile 3 and also the Shareware details. Included are all the necessary AmigaGuide libraries and utilities, so if you don't already have them, you can install it.

Morse Code Trainer

Author: John Cassar
This was reviewed last month in the PD section and awarded a Star buy. As promised, it has been included here on our Coverdisks. It might seem a little specialised, but being such a competent program, it's earned its place. If you've ever wanted to learn Morse Code, or simply feel the need to annoy anyone in earshot by sending Morse insults (to Amiga Format, in our case), then this is your chance.

There are options for learning using the tutorials, there's also a freehand mode for tapping out messages. Every item of Morse is included, from the normal alphabet to international letters and RST codes. Different speeds can be set for the number of words per minute and you can have either audio or visual representations of Morse, or both. – •– • ––– ––– •– ••!

Technical**Zone**

There are three utilities designed for the more experienced user here. They all require some knowledge of how to use the Shell.

- **Arc** and **Arcbit** (Author: Malcolm Clarke) These are two commands that enable you to make backups of specific directories easily. Arc copies only files from a directory whose Archive bit hasn't been set, thus allowing you to back up only new files. Arcbit can set or unset the bits of programs in a directory.
- **Clip Handler** (Author: Michael Letowski) This adds a useful feature to your CLI. It allows you to copy and paste within the windows, by selecting the text with the mouse and then using the usual right-Amiga-c and right -Amiga-v combinations.
- **Req2key** (Author: Ralf Schmitt) This gives you a configurable way of bringing control of requesters to your keyboard – should one pop up, you can control it directly.

Disk contributions

This month's disks were compiled using files from Aminet and from Walton's Mountain BBS (☎ 0181 891 5730), and with the help of the authors of the programs.

If you would like to contribute to a future disk, whether it's a full application, utility, 40K demo, clipart, font, 3D object, or even a module, send it to:
David Taylor,
Amiga Shopper Coverdisk Contributions,
30 Monmouth Street,
Bath, Avon BA1 2BW.
Please only send the minimum distribution archive. Also, please do not powerpack (or similar) any files because it detracts from the archiving.

Information**Zone**

As ever, the PD Houses Directory and User Group listings have been updated and included in both AmigaGuide and ASCII format. These give details of all the PD houses that have submitted their details and makes up the biggest list we know of. The User Groups can help you find people with similar interests to yourself. Hard drive users should note that because of the way the disks are archived this month, if they install everything to hard disk, the User Groups directory is inside the Magic Paint Box directory and the PD Houses inside the Pro-Lottery directory – because it is the most efficient way of de-archiving for floppy users.

Programming**Zone**

For those following our AMOS tutorial, you'll be glad to know that the code can be found here. The Executable form of the program has been included on the Subscribers' disk this month, which was down to the space available. ■

Don't forget to send your contributions for the Coverdisks to us at the usual address.

Subscribers disk

If only we could fit more on to the Coverdisks, we'd be able to give you even more of the brilliant programs that are available. Well, in a way, we can, because each month a third disk is given away absolutely FREE to every single AS subscriber. Amazing, eh?

This month the disk contains Sound Box, an incredible sound sample converter, System Prefs, the program that gets the best performance from your Amiga, FastIPrefs, which is IPrefs re-written for OS 3.1 and a full dozen more utils, including the 3D objects we couldn't put on the Coverdisks – one each for Real 3D, Imagine and LightWave. In total there's over 2Mb of excellent Amiga stuff.

The only way to get this disk is to subscribe, which gives you many other benefits like special offers and exclusive reductions.

So, if you want to save money off the cover price of AS, if you want a FREE third disk every month, and if you want a cool Subscribers Newsletter, then take advantage of our exclusive Subscribers offers. Phone our Subscription hotline now on ☎ 01225 822511.

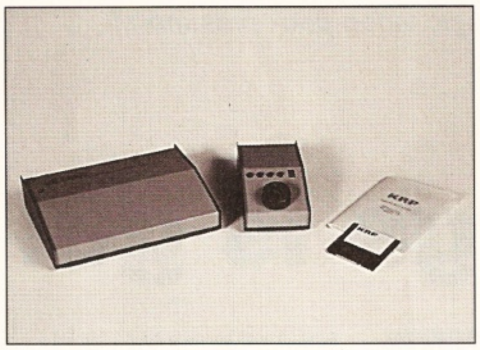


KRP Video Services

VIDEO EDIT CONTROLLERS

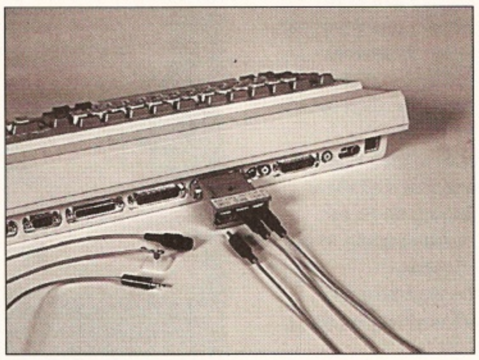
KRP manufacture a range of computer video edit controllers which are designed to suit everyone from the casual home camera user to the professional film maker.

Camcorder User magazine have given the KRP system a Gold Award and voted it the Best Amiga Editor in their Desktop Video Awards for 1994/95



KRP EDITING FEATURES:

- Entire films can be made automatically by the computer, which controls the players and recorder inserting or overlaying titles and graphics as required (using a genlock)
- In order to control a player VCR, it must have an edit control socket. The KRP Edit Plug requires either a Sony LANC or Panasonic 5/11 pin edit control socket. Other KRP systems support additional types of control including a control socket fitted by KRP. The recorder can be controlled through an edit control socket or by infra-red.
- Mixers such as the Videonics MX1 and Panasonic MX30/MX50 can be fully controlled by the KRP software. This means that the computer can set up and operate all the features on the mixer automatically. (The Videonics MX1 does not require modification to take advantage of this feature).
- Mixers and other video devices which have a GPI interface socket can be triggered to auto-take at exactly the right moment as the film is being made.
- KRP fit and supply kits for other mixers such as the Panasonic AVE5, to provide a computer controlled auto-take over a specified number of frames.
- For manual operation of mixers and other devices, the KRP program provides a verbal "3, 2, 1" count down.
- Scene in and out points are defined using either the VCR's tape counter or timecode if available. All KRP systems support RCTC timecode. With timecode, cuts are consistent and accurate to within one frame. With the tape counter, cuts are generally accurate within a few frames.
- Full AB Roll capability (with 2 players and a vision mixer).
- Computer control of audio dub and video insert onto an existing recording.
- KRP fit and supply kits for Hi-Fi video recorders to support SMPTE timecode for use with the TES systems.
- Using a genlock, the camera tape or other master tape can be copied to create a dub which has the counter reading or a timecode burned into the picture. Edit decisions may then be made using the copy tape. This keeps the original master safe until it is needed to make the final production.
- A separate jog/shuttle controller, which is switchable to any one of up to four machines, is available as an optional extra. This controls any VCR which is connected to the KRP system, whether or not it has its own jog/shuttle dial. Control is limited only to the available speeds on the VCR. Many VCR's which do not have jog/shuttle control still have several forward and reverse speeds and become much more useable with the KRP jog/shuttle controller.



THE KRP RANGE

KRP offers the following range of edit controllers and will upgrade an existing KRP system to a more powerful one for little more than the current retail price diffference.

1. Edit Plug — £120 (3 M/C) £150 (4 M/C)
The KRP Edit Plug is a 3 or 4 machine edit controller contained in a parallel port plug. It requires Sony LANC or Panasonic 5/11 pin control for the players and supports most KRP Edit Features except SMPTE timecode.

2. ES30 System — From £289.00
The KRP ES30 system is a 5 machine edit controller which connects to the computer via a parallel cable. It supports Sony LANC, Panasonic 5/11 pin, and KRP fitted control sockets. All KRP edit features except SMPTE timecode may be used.

3. TES30 System — From £549.00
As the ES30 system but also supporting SMPTE timecode and RS232 control.

4. TES30 PRO — From £799.00
As the TES30 system but also supporting industrial parallel and serial control systems. Expandable to control up to 8 machines.

WHY THE AMIGA SYSTEM?

Even if you currently own a PC or some other computer, there are good reasons for using an Amiga for editing your videos:

- Video related features such as high resolution graphics, which can be used to create titles and animations, are standard on the Amiga. It can cost more than an Amiga to add these features to a standard PC.
- Most people who venture into video editing find it so absorbing and interesting that they rapidly develop a need for a permanent editing set up which is seperate from their other computing requirements.

Nevertheless, KRP is developing a PC version of its products for those who already have a suitable PC system available.

The KRP system is continually being improved and developed. It is versatile and expandable. Being computer based it offers several significant benefits over a hardware only editor.

- New features can be offered to existing users simply by sending a new program on a 3.5" disk.
- Titles and graphics can be created using any software package of your choice.
- The computer may be used for other completely separate applications if required.
- Film information is stored permanently on 3.5" or Hard Disk. Films can be modified or remade at any time.



FOR FURTHER DETAILS CONTACT:

KRP VIDEO SERVICES
BUCHLEY LODGE, BALMUILDY RD.
BISHOPBRIGGS, GLASGOW G64 3QQ

TEL. 0141-762 2510
FAX. 0141-762 2124

News

This month in Amiga Shopper's news pages: Jonathan Anderson talks to AS; AMOS Compiler special offer; an Amiga Magic video pack plus more!

The World Of Amiga is go!

We contacted the general manager of Amiga Technologies UK, Jonathan Anderson, and asked him to update us all on how the Amiga is selling in the UK, amongst other things...

Amiga Shopper: How many A1200s have been sold so far? Are you on schedule for the 60,000 that you hoped to sell by Christmas 1995 in the UK?
Jonathan Anderson: We never divulge sales until our financial year end. However, its fair to say we have had our share of teething problems and as such have lost some ground. Amiga Technologies are working very hard behind scenes to ensure that the UK receive product in quantity.

AS: Several of our readers have written in to us complaining of poor service from Escom staff (see Talking Shop on page 86) when they asked about the A1200s in stock. They all say that the sales people were not interested in telling them about the Amigas and some complained that staff were actually derogatory towards the A1200 bundles they had in stock. And then tried to sell them a PC!

One member of staff is even reported to have said that there was no point buying an Amiga because they weren't going to be made after Christmas.

Why do the staff take this attitude and will anything be done to change it?
JA: Your concerns over high street staff selling Amigas are shared here at Amiga Technologies. If your readers are unhappy, may I suggest they speak to the store manager. If they find the situation is the same, then write to me, with staff names, location, and a brief scenario, and I'll be happy to send these to the higher echelons.



Jonathan Anderson is looking forward to the Show.

AS: Are the A4000s ready yet? When will they be on sale in the UK or US?
JA: Yes, more good news. I've just heard that Amiga 4000 Towers will be available in 040 format in December. The 060 Tower should be available by the end of January.

AS: When will the Q drive be released? Is it on time?
JA: Same time frame for the Q drive. Small quantities initially with a large rollout in Q1 [first quarter 1996 – Ed].

AS: When and where is the World Of Amiga Show to take place?
JA: We have had a few problems finding a venue so near to Christmas. We did provisionally book a London venue, later we were told that it was double booked. The good news is I can confirm The World Of Amiga will take place at the Novotel, Hammersmith on 12th and 13th April. It will be nice to go back to the venue where the first Amiga shows took place. The Novotel has many happy memories for me personally and I hope for the early Amiga supporters.



"Amiga 4000 Towers will be **available** in 040 format in December."

The Surfer

Jonathan went on to tell us about a new Amiga Comms pack called The Surfer which they will ship in the first quarter of 1996. The pack will consist of an A1200 HDD with a modem and Internet software. Further details will be released shortly and we will have more information for you then.

Finally, Jonathan wished readers of Amiga Shopper a prosperous 1996!

AT contact

If you want to write to Jonathan Anderson about problems you have experienced in Escom stores here is his address:

Jonathan Anderson,
General Manager,
Amiga Technologies UK,
1st Floor, 6 Bridge Avenue,
Maidenhead SL6 1BB.

New Amiga?

There are rumours of a new Amiga being released early in 1996. The A1200+ was announced by Petro Tyschtschenko at the Computer Arena conference in Rome.

The A1200+ may feature a 68030 processor with a SIMM socket on its motherboard to facilitate RAM upgrades.

We will bring you more news when we have it! ■

AMOS Compiler offer

Calling all AMOS coders! F1 Licenceware are relaunching the AMOS Pro Compiler 2 for just £14.99 (+ 50p P@P). The Compiler takes your AMOS source code file and turns it into a stand-alone executable file.

F1 have leased the Compiler from Europress for a limited period only and they've slashed a massive £20 off the original price of £34.99, partly by replacing the original box with a neat plastic sleeve. The Compiler comes complete with a 50-page manual and a disk to upgrade to AMOS Pro to version 2.

And Amiga Shopper readers can take advantage of a further price reduction – they can get the AMOS Pro Compiler plus the AMOS AGA extension for only £16.99 (+ 50p P@P). Just say that you saw the offer in Amiga Shopper when you order.

To order, make your cheques payable to F1 Licenceware and send them to F1 at 31 Wellington Road, Exeter, Devon EX2 9DU. If you want any more details, contact F1 Licenceware on ☎ 01392 493 580, or E-mail steve@dcandy.demon.co.uk

World Of Amiga Show

As Jonathan Anderson has already said, we finally have firm news about the World Of Amiga Show. The show will take place on 12th and 13th April 1996. There will be between 40 to 60 exhibitors and the show will feature three areas of stands: the software publishers; a retail area and a high end application area.

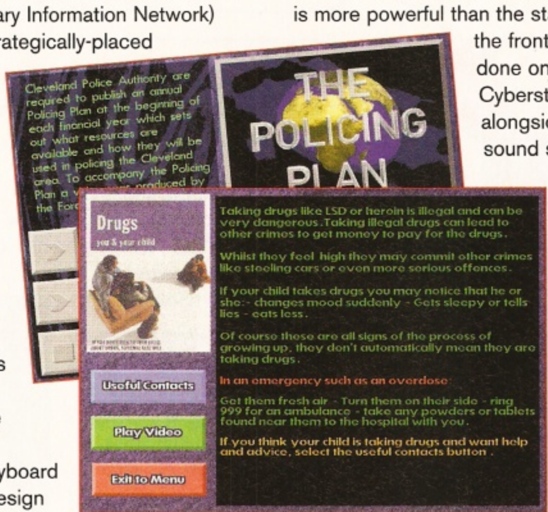
The cost of a ticket will be £7 for adults and £5.50 for children. Tickets can be obtained by calling the hotline number on ☎ 01369 706346.

Amiga Shopper and Amiga Format will be on a stand too!

Amigas join the force!

The Amiga has been chosen by Cleveland Police as the most cost-effective and practical platform for a new information network which keeps the region's police stations in touch with police headquarters. Codenamed CCIN (Cleveland Constabulary Information Network) the system consists of 30 strategically-placed Point of Information Terminals in each station.

Each terminal is housed in a solid blue metal casing resembling a large swing bin. The Amiga inside is a 4000/030 configured in the following manner; 6Mb RAM, 1/2Gb hard drive, Pegger MPEG decoding card, a Hydra Networking card, and Scala's Infochannel software.



The terminal displays are bonded touch screens relinquishing the need for keyboard or mouse use. "We had to design everything round simplicity and ease of use", said Tony Thompson, CCIN's permanent on-line system operator.

Much of the system is based around serving the officer on the beat's needs. There are training packages, self-assessment packages and general information packages available. Each page on the system is flagged and its usage logged and reported back to police headquarters. Tom Keegan, head of the constabulary's video unit and head designer of CCIN is quick to point out that this flagging isn't Big Brother: "We use the feedback to further tailor our packages to the needs of the people using them."

The network is a master-slave rather than client-server set up. "Client-server networks require multi-plexing and we just don't have the bandwidth." The Amiga used by Tony Thompson is a clone of the terminals dotted throughout the region. "At first we were going to use our A4000 Tower system, but all we really do with the master terminal is update information on CCIN. To have used the Tower system would have been a waste of resources."

The A4000T used by the video unit at police HQ is more powerful than the standard terminals. Much of the front end work on CCIN is done on this machine. It has a Cyberstorm on board working alongside a PAR card, 16-bit sound sampler, LightWave, a Picasso 24-bit card and TVPaint 3. That the results are professional and up to the high standards of a television broadcaster such as SKY is beyond doubt.

Much of the power of CCIN relies on the use of video. The video unit MPEG encodes important video information using a Pentium-based PC networked with the master terminal. This can then be transmitted to any or all of the terminals on the network.

Many of the system's training packages make efficient use of MPEG video. "Nothing can beat video for immediacy," said Tony Thompson. "If there's anything an officer didn't understand, he can use the terminal to instantly replay the video he's just watched." The use of MPEG in small chunks minimises wait times and makes standard analogue video look archaic.

Tom Keegan is proud of his system which he intends selling to other forces throughout the UK. He expects the dissemination of information to become more efficient and effective than with traditional means. He is adamant that the Amiga is the best platform for the constabulary's needs.



Titbits

Three of a kind

New A1200 users will be interested in three new books that Bruce Smith Books has just published. All the books are aimed at the beginner to the Amiga and will help you to understand your machine better.

Total! Amiga Assembler, written by our very own Amiga Answers Operating Systems programming expert, Paul Overaa costs £24.99; Total! Amiga Workbench costs £19.99 and Total! Amiga AmigaDOS (see p. 22 for a review) costs £21.99.

Contact Bruce Smith Books on their 24-hour credit card hotline (☎ 01923 894355) for ordering details.

Musical security

Keep your musical equipment safe with the Roland Owners Club's (ROC) new tracking service. The Musical Instrument Tracking and Registering Against Crime Service (MUSITRACS) is open to both members and non members alike.

All you have to do is register your equipment for a small fee and MUSITRACS will log all the details of your equipment (date purchased, owner, serial number, etc) into a database. If equipment is then offered for resale, this database can be checked to make sure the stuff isn't stolen! For further information call ROC on ☎ 01733 233135.

In the club

A BBS club has been set up in Scotland for people wanting to communicate across the computer platforms. Off-Line BBS operates via the postal service and supports Amiga, PC and Atari users. Using Off-Line is free and is open to anyone who can read ASCII text files. The club has plenty of stuff going on: debates, free ads, help, advice, an RPG, Freeware and Shareware.

For details of how to register and to receive you new user information pack, call Off-Line BBS on ☎ 0881 831 908. Or send a disk (stating format and machine) and a stamp to: Off-Line BBS, c/o S. Fulton, P.O. Box 9502, Johnstone, Scotland PA6 7EW.



A Touch More Amiga Magic

SCSI Zip Drives



£189 £239 inc Squirrel SCSI

zip™ drive 100 SCSI

Since being introduced, the Zip™ Drive has caused a storm in the storage industry, offering an unrivalled level of price, performance and reliability. This newest, most portable exchangeable hard disk drive weighs in at just 1lb, has fast transfer and access times (up to 1Mb/s transfer, 28ms seek), easily fits in your hand, your bag or your briefcase, stores up to 100Mb on floppy-sized disks, is perfect for all types of application and is priced at a level that will make you want to unzip your wallet immediately!

Price inc 100Mb cartridge, extra 100Mb cartridges £15.95 or less!

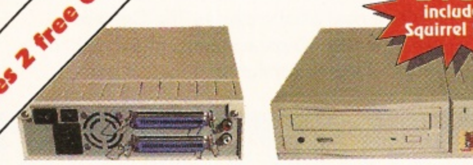
Order your Zip drive now to avoid disappointment!

Amiga Zip Tools
exclusively from HiSoft

Zip drives from HiSoft include everything you need to get going on a SCSI-aware Amiga: the Zip 100 drive, a 100Mb cartridge, all necessary leads and a complete set of software, programmed by HiSoft, including:

- *Easy access drivers*
- *Password protect*
- *Write protection*
- *Temporary unprotect*
- *Cartridge initialisation*
- *Cartridge eject*

SuperDouble CD Pack



Includes 2 free CDs

£189 includes Squirrel SCSI

The superb SuperDouble CD-ROM is back! Using an excellent 2.4 speed drive from Sony, this CD-ROM provides outstanding performance at an amazing price. With a 360Kb/s data transfer rate and a 230ms access time, the SuperDouble CD-ROM provides all the speed for the power user.

The SuperDouble is fully compatible with the new Squirrel MPEG card, supporting the industry standard VideoCD (White Book) format.

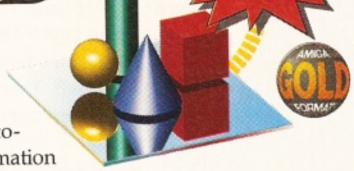
The SuperDouble CD-ROM pack includes the award-winning AGA Experience CD-ROM - rated 93% in issue 79 of Amiga Format. This CD-ROM is crammed full of pictures, utilities, demos, animations and tools for AGA Amigas. The SuperDouble pack also includes the latest Aminet CD-ROM. This disk is brimming with the latest PD, shareware, utilities, demos and picture files from the Aminet archives on the internet.

A *full* classic Squirrel is also included in the pack. This allows easy connection of any SCSI peripheral to the A1200. The package has all the necessary drivers and software for easy connection of hard drives, CD-ROMs and removable disk drives, such as the Zip™ Drive, to your Amiga.

Cinema4D™

Professional Ray-Tracing and Animation for your Amiga

£199





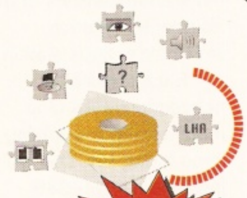
Cinema4D is the easy-to-use ray-tracing and animation system for your Amiga. Equipped with an intuition-based multi-tasking editor, Cinema4D is replete with every conceivable option including window-based real-time interactive modelling, direct modelling in 3D, basic and complex primitives with infinite variations, easy object manipulation, floating toolbars, user-defined menus, object and texture lists, definable object hierarchies, optimised versions for 68020 (A1200 etc.) & FPUs, and much more!

The Cinema4D animator brings you even closer to the world of "virtual reality", breathing life into objects and scenes. Whether you have your spaceship dock with a spacestation, or take a tour around the darkest dungeon - with Cinema4D it's so simple. Just a few mouse clicks and you will have your objects move realistically through time and space.

Cinema4D also includes MagicLink, the flexible object converter. MagicLink converts all popular object formats (Imagine, Sculpt, DXF, Reflections, etc.) to Cinema4D format & back.

DiskMAGIC

Easy File & Disk Management



£39.95

Constantly doing battle with the Shell/CLI? Stop this futile struggle with DiskMAGIC, the easy-to-use file and disk management utility from HiSoft.



DiskMAGIC simplifies every task you perform, from the copying of disks and files, to the viewing of pictures and anims. In fact, after using DiskMAGIC, you'll wonder how you ever used your Amiga without it.

Order Hotline

0500 223660

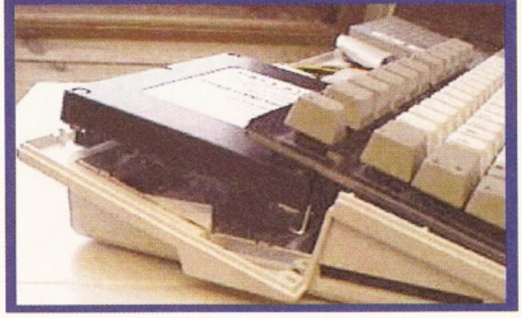
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New **A1200 hard drive**



The trouble with fitting your own 3.5-inch hard drive to A1200s has always been that it has involved modifying the casing yourself by cutting away at the shielding. This has often encouraged the more timid to fork out for the more expensive, but easier fitting, 2.5-inch drives. This could all change now though with the launch of a 3.5-inch drive that fits without the need to make any modifications. An 850Mb drive is available for £199 (+£7 P&P) and comes prepped, formatted and ready for use with 25Mb of PD utilities free to get the serious user started.

More info is available from HiQ ☎ 01525 211327, or from their www site @ www.hiq.co.uk.

We'll hopefully have a full review next issue.

AMIGA POWER

ATTENTION READERS. We the rapidly-diminishing hesiodic theogony that is AMIGA POWER wish to drop our knowledge on those assembled. We pantomime looking left and right. We lower our voices and DISSEMINATE ESSENTIAL INFORMATION.

Which (if either) of Legends and Speris Legacy is, indeed, Zelda – but on the Amiga? We will tell you. Which (if either) of Championship Manager 2 and Tracksuit Manager 2 is the more splendid? We will tell you also, while you relax with a lemon tea and our ensnaringly spectacular Coverdisk game, Super Foul Egg.

AMIGA POWER 58 will be available on Thursday, 25th January. Mull over whether to buy it or not.

Your pals
AMIGA POWER

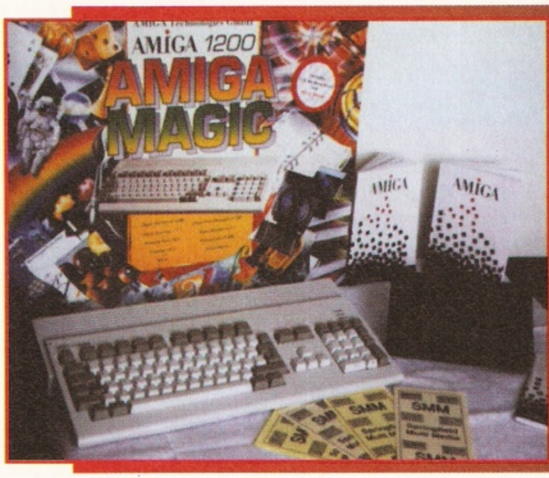
AMIGA FORMAT

Listen up. The next issue of Amiga Format breaks into the movies in a special feature on desktop video. We'll be going over everything from titling packages, genlocks and edit-controllers to generating and recording ray-traced animation sequences.

Also in the issue, we have reviews of the new Epson GT5000 scanner, the Maple mathematical tool, some terrific LightWave object sets and of course the latest installments of our Real 3D tutorial and the celebrated Amiga.net column.

Amiga Format February 1996 is on sale on Thursday, 18th January 1996.

Nick Veitch
Editor, Amiga Format



Amiga **video magic**

Custom-made for video enthusiasts, Springfield Multi Media are offering the A1200 170Mb hard drive Amiga Magic bundle fitted with extra memory, courtesy of a 4Mb trapdoor expansion board. SMM are also packaging it with a Lola L2000 S-VHS Hi8 composite genlock and they are offering a professional half-day training session as part of the deal too. All this for £1,150.

The Amiga Magic pack already has Scala MM300, Personal Paint 6.4, Photogenics 1.1, Wordworth 4SE, TurboCalc, Datastore 1.1, Organiser 1.1, Print Manager and the two games bundled with it.

Springfield Multi Media are based in Chelmsford, Essex. Give them a call on ☎ 01245 227588.

Tit**bits**

OctaMED price slashed!

You can now save £10 off the price of OctaMED Pro v6. The publishers of this excellent music program, RBF Software, have been able to offer this reduction because they have cut out the middleman and are selling OctaMED directly to the public themselves.

To order your copy of OctaMED Pro v6 simply send a cheque for £25 (inc. P&P) to: RBF Software, 169 Dale Valley Road, Hollybrook, Southampton SO16 6QX. The price includes a laser printed users manual. Or call RBF on ☎ 01703 511325.

OctaMED on CD

You can also get OctaMED v6 on CD-ROM from companies like Weird Science (☎ 0116 234 0682) and PD Soft (☎ 01702 466933). The CD-ROM version contains the full commercial version of the program plus the Walkabout Music collection of over 1,000 samples, and loads of modules, MIDI files and some other stuff too!

The CD costs around £29.99 from both companies mentioned above. Call them if you want more information.

Get well soon

Amiga Shopper would just like to say hello to Albert Johnston.

Amiga Shopper's mail order buying guide

To make buying by mail order as easy and as safe as possible, Amiga Shopper has put together the following top 10 tips to buying mail order products:

1 **Before you send any money for goods, telephone the supplier to make sure that the item you require is in stock.**

Ask questions about the mail order company's policy on delivery and returns of faulty equipment. Make sure there are no hidden costs such as postage and packing. Find out when you can realistically expect to receive your goods.

2 **Always read the small print on advertisements.**

3 **Beware of companies that do not include their address on their advertisements. Avoid companies which do not answer or return your telephone calls.**

4 **Pay by credit card where you can. If you are ordering goods of more than £100 in total value, you are legally entitled to claim compensation from some credit companies if the retailer goes bust. Check your credit card company's policy. You can also try to get extra insurance in advance.**

5 **Always keep records. If you are buying by credit card, keep a note of the time of the order and ask for an order number. When ordering anything over the telephone, always double-check the price.**

6 **If you are not paying for the goods by credit card, pay by cheque instead. Never send cash through the post, and avoid using postal orders.**

7 **If you are sending a cheque, keep a note of the cheque number, the date and the exact value. Make sure you know the exact name of the mail order company too.**

8 **When you receive your goods, check them carefully. If anything is missing or faulty, contact the supplier immediately.**

9 **Always order goods from the most recent issue of Amiga Shopper.**

10 **If a problem arises, contact the supplier in the first instance. Calmly and politely tell them your problem. Most problems turn out to be minor hitches or misunderstandings that can easily be resolved without taking the matter further.**

If you think you have a grievance, contact your local Trading Standards Officer. The number is in the phone book.

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ReadFile	244	1363	k/sec
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VISA

Painless dental visits a reality!

A visit to the dentist will never be the same again, if Virtual Products get their way. They have already installed virtual reality i-glasses in several UK dental surgeries and they hope to sell 1,500 more in the next year! The idea behind selling i-glasses to dentists is apparently to keep the patients entertained while the dentist drills away at their teeth!

"The i-glasses are extremely adaptable and can be applied to many different situations, with dentistry just another application", said Denis Premiski, Virtual Products' general manager.

And as we reported in our news pages in the November issue, Virtual Products said at the UK Amiga Technologies press conference that they also want to introduce the i-glasses for use in hospitals, engineering companies, real estate and for viewing erotic videos too!

The virtual i-glasses can be used to play games or view videos and TV programmes in 2D or 3D, they are compatible with any standard video output and have stereo sound. The Amiga version of the i-glasses costs a cool £599 and they are being sold at Escom shops around the UK, so pop in to your local and give them a try!



High society

The Amiga International User Groups Association is a brand new Amiga society aimed at distributors, groups and programmers who produce disks for the Amiga. The Association is a new version of the club set up by the Amiga Club, Roberta Smith DTP, CopyCats, Dancing Frogs, Northern Beasts, Les Chats Noir and Amiga Maritimers which closed in 1995. If you would like to know more about the Association call ☎ 0181 455 1626.

Clean and simple

This Gladiator-style pugle stick is actually a device for cleaning your computer mouse. You don't need to use any cleaning fluid with the Mouse Mechanic, just turn your mouse over, remove the cover and ball and rotate!

The Mouse Mechanic fits all standard mice and costs £5.95 (+£1 P@P). It is available from Gordon Harwood Computers ☎ 01773 836781.

However, when we tried it in the office we found that it wasn't very effective, frankly.



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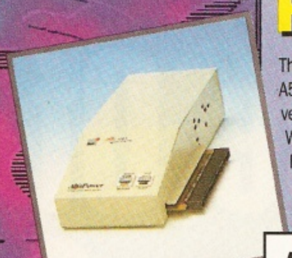
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DISCOLOGY



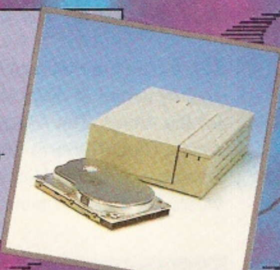
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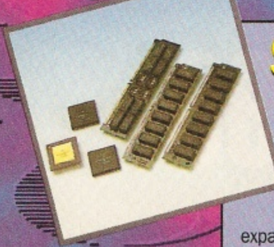
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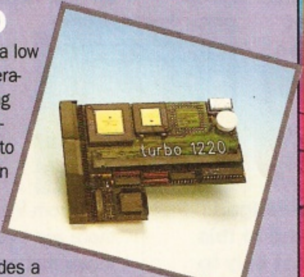
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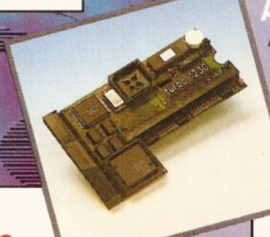
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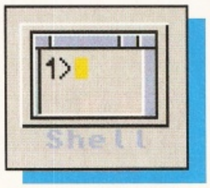
Shell suits

Imagine the scene: Wednesday afternoon in the AS offices and **David Taylor** *sits patiently explaining again how to use AmigaDOS to a reader call. Suddenly, it all becomes clear – let's solve the problems once and for all and write a feature on how the Shell can be used to improve general housekeeping.*

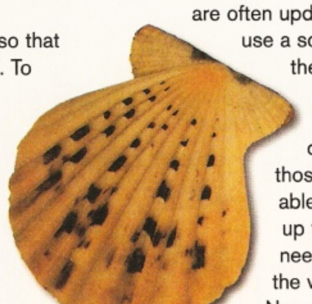
Despite being the easiest Operating System (OS) in the world to get to grips with (and that isn't an exaggeration, as those PC users out there will agree), many Amiga users refuse to go beyond the Workbench interface. The merest mention of a command line interface (CLI) makes them blanch. This is a real mistake because many of the Amiga's features can only be accessed from the Shell, and often simple installation problems with programs can be sorted with one typed line, but the program gets dumped because of a lack of basic knowledge. We're going to try and put an end to this by giving you an introduction not only to AmigaDOS, but also a brief grounding in the way the Amiga works so that you have more of an idea of how to make practical use of the Shell to speed up your tasks.

Getting started

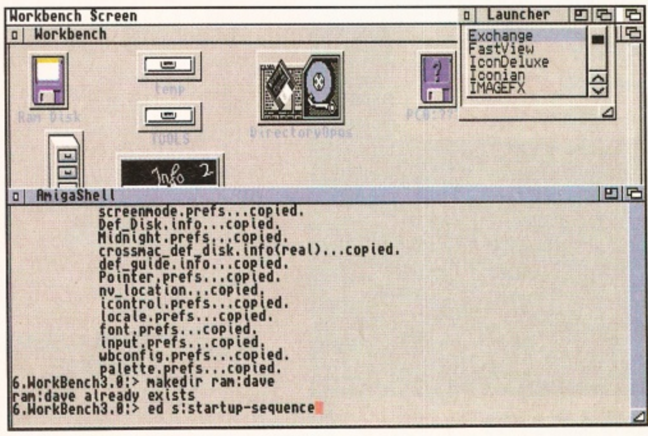
The first thing to do is open a Shell so that you can make use of the commands. To do this, locate the Shell icon in the System drawer on your Workbench disk or partition. Double click and a window opens, into which you can type your commands.



From Workbench 2 onwards there are two types of commands; those that are built into the Amiga's hardware and those supplied as software. (On earlier versions like 1.3, all the commands were software.) The hardware commands are the day-to-day ones that don't take many options and are necessary to do basic things. The software commands are those that change and are often updated by PD authors. When you use a software command, you will see the drive light flash as the Amiga reads the command from the C directory on your Workbench disk. The C directory is one of those directories that you won't be able to see normally when you open up the disk. To see the drawer, you need to select "Show all files" from the window menu on Workbench. Now you open up the C drawer and see all the commands.



Alternatively, you can use the Shell to tell you which commands are there. Type: `dir c:`. This command is used to list the contents of a directory (hence `dir`) and here will tell you what is available to you from the C: directory.



Clicking on the Shell icon opens up a window like this where all the action goes on! It can be closed by clicking on the Close gadget or typing: Endcli.

Syntax errors

The more astute will have realised that some trickery is already afoot. The syntax that the Amiga uses is that a name alone denotes a file, a / after a name means that it is a directory, and a : after the name means that it is a volume (or disk). However, we just listed a directory by referring to it as a volume. Wait! We haven't gone mad. The Amiga has a very clever system called Assigns, which we keep mentioning every month. An Assign allows you to make the Amiga



Jargon buster

Shell/Command Line Interface (CLI): These terms have become interchangeable. Congratulations if you do know the difference; if you don't, then don't worry. This is the area into which you enter the text commands that operate the Amiga.

StartUp-Sequence: The most important AmigaDOS script. It is found in your S: directory and is executed automatically on StartUp. This does all the necessary copying and assigns that your system needs to operate. Always have a backup copy of this.

User-StartUp: Introduced with Workbench 2, this script is executed by the StartUp-Sequence. It exists for you to enter any commands or assigns that you want to be executed every time you boot up. This should mean that your StartUp-Sequence remains untouched and safe.





Public Domain extra

The Public Domain contains masses of replacement commands that can be added to your C: directory to either enhance your Shell or to replace earlier standard commands. One good example is SCopy (on the AS52 Coverdisks), which is a vast improvement on the original Copy command because it has more options and yet is miles faster. You can also obtain full replacement Shells that contain all the commands internally, so that when launched, they don't keep reading from disk. ZShell is one of the best and was included on the Subscribers disk, AS55. You can also get programs that allow you to add a clipboard facility to Shell so that you can cut and paste – Clip-Handler is on this month's Coverdisks in the TechnicalZone.



Commands, like SCopy, can be obtained to replace original AmigaDOS ones.

Archivers

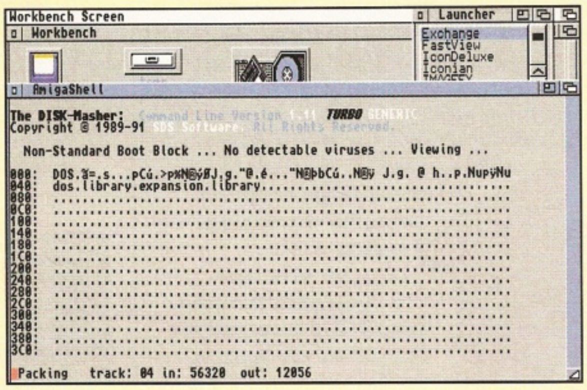
Archivers are one of the types of command that throw people the most. You receive an archive, but how do you get the programs out of it?

DMS

DMS is a popular way of archiving entire disks and is used particularly for disks that are non-DOS. This archiver takes a very strange command. The DMS file, whether it is being created or read from, goes first in the syntax. So to make a DMS file of a disk reading from your internal drive type:
`dms read ram:myarchive.dms from df0:.`
To write a disk from a DMS file, you would type:
`dms write ram:myarchive.dms to df0:.`

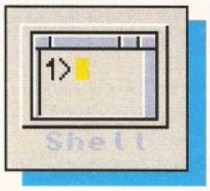
LHA/LZX

These two archivers are the most popular around for packing up files and directories. They both use almost identical syntax and like DMS always have the archive name first. To add a file into an archive, type:
`lha or lzx a ram:myarchive.lha/lzx dh1:myfile.`
To de-archive an archive, type: `lha or lzx x ram:myarchive.lha/lzx ram:`
Evaluation copies of these archivers can be obtained from PD Libraries and many Coverdisks.
Please note that obviously you need to change the directory names and don't have to use RAM:.



Disk Masher System is still a popular archiver but it has a complex Shell syntax that often confuses users.

pretend that a directory is actually a volume. It works very simply, by letting you tell it what the pseudo-volume is to be referred to as and the path that it can find the directory it is to use. Thus you get things like: `assign C: Workbench3.0:c/`. When you enter an Assign it must have the details of the path correct to the letter.



When you turn on your Amiga and boot Workbench, a set of AmigaDOS commands, contained in a script called the StartUp-Sequence, is executed. Some of these commands are Assigns which automatically set up the common ones. These make it easy for you to list contents or copy files to and from these directories, because when you use commands that refer to files or directories, you must give the Amiga complete directions as to where to find them (i.e. its full path), e.g. `df0:data/myfile`. As you already know, the C: directory contains the commands, but there are many more directories that are used by the system.



Sharing the workload

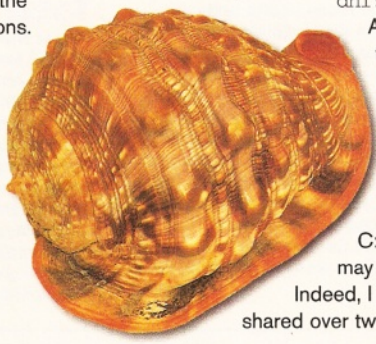
The devs: directory contains devices (files named xxx.device) which are files that are shared for use by different programs, saving the programmers from writing the same code again and again. Largely, the devices are used to control the ports at the back of your Amiga. The serial.device is used by programs to send and receive data through the serial port and so is used by Comms packages for using modems.

Similar to devs:, but even more commonly used, is the libs: directory which holds the Amiga's libraries. Libraries are probably the biggest source of problems for novice users, despite the fact that they exist to make life easier! (Expert users, who are thinking "No-one can still be having trouble with libraries" – take a look at Amiga Answers.) The libraries are files that are used by different programs to do similar things. There are standard ones that come with the Amiga, such as the maths series, used to do calculations. There are also dozens of PD libraries, which hundreds of programs use. One of the most popular is the reqtools.library, which programs use to display requesters. Another example is the magic user interface (MUI) library that is needed for MUI programs to run. This is why, when you get some Shareware programs, you need to make sure that all the necessary libraries used by the programs are available for it in your libs: drawer.



The other three important pseudo-volumes on your Workbench are l:, s: and fonts:. The l: directory contains handlers, the s: directory various files and preferences used at StartUp (you can find your StartUp-Sequence here) and the fonts: contains all the fonts used by programs. For each font used, the system needs a drawer named after the font, which contains a picture of the font, and also the xxx.font file in the fonts: drawer.

The Assign command, though, has another trick up its sleeve. You can assign the same pseudo-volume to more than one directory. This means that when the Amiga is looking for a file, say a command, and it checks the C: directory, you can actually have it set so that it searches more than just one directory. This is done by using the add option, e.g. `assign C: dh1:extrac/ add`. Now the Amiga will check not only the C: directory on Workbench but also the directory extrac/ on dh1:. The advantage of this is that it saves you from having to copy all your commands into the C: directory, which you may not have room in. Indeed, I have my libs: drawer shared over two partitions simply



because my system partition isn't large enough to contain them all.

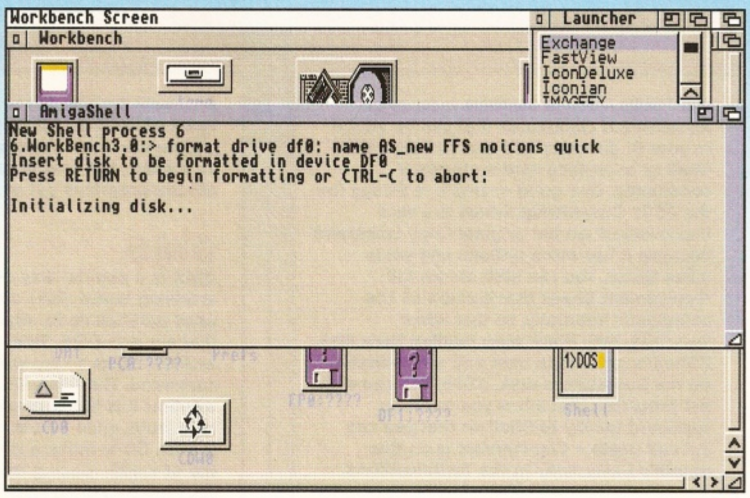
Mastering the Assign command is an important step in solving many of the small problems that arise when using programs. For instance, many programs (and games) installed to a hard disk suddenly keep asking for disk 3 (or whatever) even when you know that all the data is copied from that disk into its new directory. Solution? The Assign command – simply assign the disk to that directory, e.g. `assign disk3: dh1:the program/`.



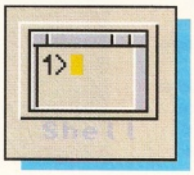
However, you'll also notice that not all of the commands that you use are stored in the directories assigned to C:. This is because the Amiga also use a command called Path that tells it which paths it should search for commands. It is used in a similar way to Assign, e.g. `path dh1:pdcommands/ add`.

All commands that you use must be available for the Amiga within the paths specified to it or you will get an "unknown command" error. This means that the commands must be in either the C: directory or any directories assigned to C: or any of the other paths that you have specified. Like the assigns, the Amiga does set up some paths at bootup in the StartUp-Sequence.

You can avoid the problem of having the command in the path by changing the current directory to that of the one that contains the command because the Amiga always checks the current directory too. This is done by CD and requires the full pathname, e.g. `cd dh1:pdcommands/`.



The Format command is one of the few that offers you a second chance before starting.

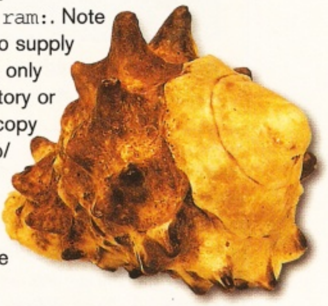


But there's more to Shell life than assigns and paths. Simple things like copying, protecting and deleting files are much more flexible from the Shell.

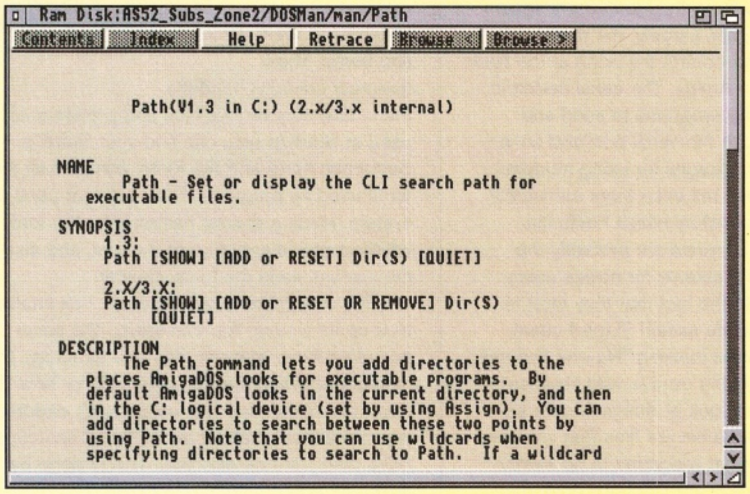
Carbon copy

There are really two types of copying that can be done. The first is copying an entire disk. This is not done by using the Copy command, but the Diskcopy command. This command copies the disk track by track, instead of file by file and is much faster than copying all the files from one disk on to a spare disk. It's very easy to use and simply needs to be told the source drive and destination (in that order) – e.g. `diskcopy df0: df1:`.

The Copy command is more flexible and can copy either files or directories. To use this, you must supply the correct path, and its destination, e.g. `copy dh1:temp/myfile ram:`. Note that you don't have to supply the name at the end, only the destination directory or volume. That would copy myfile from dh1:temp/ to RAM:, but you can use the Copy command to do this and change the name at the same time,



Reference material



This electronic AmigaDOS manual in AmigaGuide format offers exact definitions and usage of each command.



The Total AmigaDOS 3 book from Bruce Smith Books offers a clear introduction to AmigaDOS.

There are currently two really useful texts available. The first is an AmigaGuide document, called DOSMan, that can be obtained from most PD libraries and was also contained on the AS Subscribers disk, AS52. It simply details every AmigaDOS command and gives you the syntax and a description of what it does. It is unmissable and should be added to everyone's collection as the ideal reference manual. It has the space, unlike this article, to cover every command and is basically an electronic rendition of the original Commodore AmigaDOS manual. If you want to get to know DOS, this will help.

Total AmigaDOS 3!

This is the second useful book. It is a full, printed text of 400 pages from Bruce Smith Books. Aimed at AmigaDOS 3 users, it takes a slightly different tack, approaching the areas in themes and explaining which commands you need to use in certain areas and how they work. For example, Path Assignments, unsurprisingly, deals with Assign and Path, but in a much more friendly and detailed way than just syntax and usage. Because of its accessibility, this book is very tempting, although the hefty price tag is a little off-putting. It should come with a support disk, which would be very useful, but we weren't lucky enough to receive this. The book actually goes further than just AmigaDOS, explaining a bit about how the system works and also about scripts and redirection of input/output in a clear and considered manner that should attract beginners.

Total AmigaDOS 3!

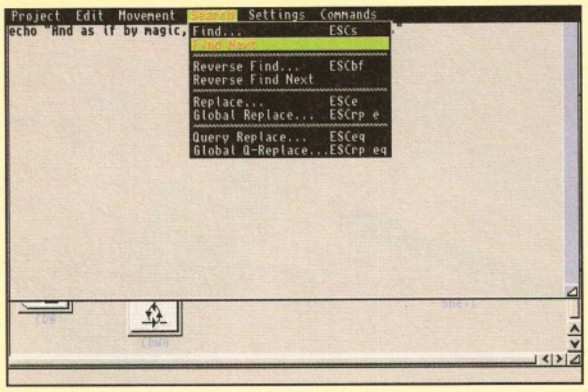
Price: £21.99
Supplier: Bruce Smith Books
Contact: 01923 894355
Verdict: 82%

Editing scripts

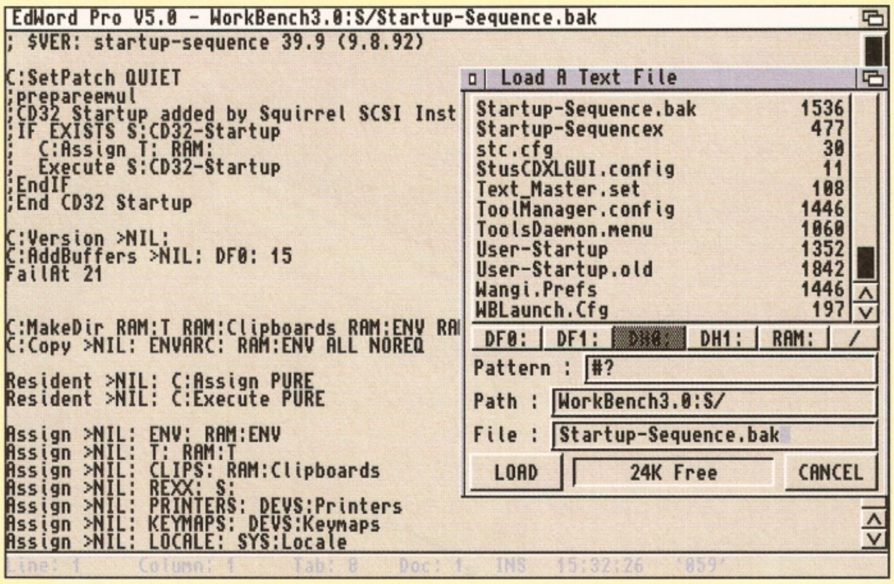
One of the useful things you can do is create scripts. These are simply text files that contain a list of commands, so you can execute a script to do a repetitive procedure, rather than sit and type each individual command in every time. Our Coverdisks, for instance, are controlled by a set of scripts designed to de-archive all the material automatically, rather than tell you to type in all the de-archiving commands.

To do this, you need to use a text editor that gives you a pure ASCII output. The Amiga comes with one, called Ed. If you open a Shell and type `ed` followed by the name of the file you wish to edit, you can start writing scripts. If you're creating a new file, just type what you want it to be called and Ed automatically creates it, e.g. `ed ram:myscript`. Remember, after you save the script, to change the protection flag to include the "s" option. Using Ed, you'll discover that the menus are slightly restricting, offering few options. This can be rectified immediately. For some reason, Commodore made Ed more powerful than they let on and hid some of its functions by using a StartUp file. To change this, open a shell and type: `rename s:ed-startup s:ed-startup.backup`. The StartUp file for Ed is now stored as a backup, should you ever want it back, but Ed won't use it on loading. Now, re-load Ed and see all the new commands, like "Reverse Find Next".

You may still find Ed restricting and choose to find a new editor. Another one supplied with some Workbenchs is Memacs and is called up in the same way as Ed. However, those that continue to expand will want the full power of a text processor. The best ones are Edwordpro 5 and Text Engine 5, both of which offer proper ASCII output and can be obtained from PD libraries. CycnusEd remains popular, but is no longer obtainable (as far as we know).



The standard Ed text editor actually has more features than are at first available – unlock its power.



Shareware text editors like Edwordpro outperform the feature-starved editors supplied with WB.

e.g. `copy dh1:temp/myfile ram:myfile1`, which copies the file into RAM: but call it myfile1. Copying directories is best done using the All option, which makes sure that copy copies every file and directory contained in a directory to the destination, e.g. `copy dh1:temp/ ram: all.`

All the files on the Amiga have a set of protection flags. These are used by the Amiga so it knows exactly what you can do with the file. Normally, the files are set to readable, writable, editable and deletable (rwed). AmigaDOS scripts also have the script (s) flag set so that it knows it can execute the script. These flags are set using the AmigaDOS Protect command. It's very easy to use; all you need to do is give it the path and filename and tell it whether to add a protection flag or remove it, e.g. `protect dh1:myscript +s` (make it an executable script) or `protect dh1:important -d` (stop a file from being deleted). The Protect command is something that should explain a few of those strange errors that occur.



For instance, you're using Delete and find you can't get rid of a file, because it is "protected from deletion". That is because the protection flag "d" has been unset; reset it using Protect and you can now remove the file. The Delete command (although please be careful here) actually has a few tricks up its own sleeve. You can, like copy, delete files or directories using `delete ram:myfile` or `delete dh1:temp` all respectively. You can also, if you are really sure, force the Amiga to delete everything in a directory irrespective of it being protected from deletion using the force option, e.g. `delete dh1:temp all force`.

No second chances

Be very sure that you want to do that though, because you won't get a second chance or be asked whether you really want to do it. This is an important aspect of AmigaDOS that makes it faster than Workbench. It doesn't continually check whether you are absolutely sure that you want to perform an action. It assumes that if you type it, you want it done and does it immediately. One exception is the Format command that gives you the chance to insert the new disk before starting to format (which it has to in case it has to read the Format command from a floppy disk). The Format command has many options, and from Workbench 2 onwards can be used to specify the filesytem used. You can also ask for it to be done quickly and without a trashcan icon, e.g. `format drive df0: name AS_New FFS noicons quick.`



Going hand in hand with the Format command is Install, which gives a disk a bootblock so it can be booted, e.g `install df0:`. When the new disk is then booted, it searches for a StartUp-Sequence in the S: directory on the disk and if it doesn't find one, simply sits at a Shell screen. For this reason, you need to ensure any self-booting disks you make have the necessary directories, such as devs:, libs:, C:, and S: with the appropriate files.

One reason why the Shell is faster than Workbench is because it has a history. If, when you have executed a command, you press the Up arrow key on the keyboard, you can move through previous commands and change them, then execute them again. So, if you are doing monotonous tasks, like formatting tonnes of disks, or if you make a mistake that needs changing, you can quickly go through it all again.

We haven't room to guide you through each command extensively, but we should have covered those that you need to know about and given you the grounding to experiment with the others. You can get a brief guide to the commands by typing the command followed by a `?`, e.g. `asign ?`. Note: Make sure you're using a copy of Workbench and any disks you experiment with. ■





Colour me perfect

We last ran a Supertest of printers in our July issue. However, there are lots more new printers on the market now. We kept **Larry Hickmott** *busy testing 10 of the best printers around.*

Buying a printer is one of the most important purchases you can make after your Amiga. In many cases it will actually cost more than your favourite computer. So it's wise to consider carefully what your options are before taking the plunge. In this month's printer Supertest, we have assembled the best line up of printers currently available for the Amiga, including a new version of the Epson Colour Stylus, the printer that came out on top in our previous Supertest back in July's Amiga Shopper.

There are three basic types of printer.

1. Dot-matrix printers. Also known as Impact or Pin printers.
2. Inkjet or Bubblejet printers.
3. Laser printers.

Let's look at dot-matrix printers first. These create an image on the paper using a principle seen in most typewriters. Press down hard on a key and a metal arm containing a mirrored impression of the letter used, will strike the ribbon. The ribbon then strikes the paper and – hey presto – you have an image of the letter on paper. Use a colour ribbon, and you can have colour too. Now that you can visualise how that works, consider what happens with an impact printer.

The difference between the typewriter and the pin printer is that instead of metal arms with letters on them, the impression on the paper is made by a series of wire pins. These are used to create very small dots on the page in the shape of an image. This image can be a letter or a picture.

There are two main types of dot-matrix printers, 9-pin and 24-pin. A 24-pin model uses smaller pins than the 9-pin printer, which enables the 24-pin model to create a higher quality print on paper. However good they are though, 24-pin printers still don't match the quality from an inkjet printer. For example, ribbons on a dot-matrix printer become dirty with use which in turn produces muddy colours on the paper. Output from both 24-pin and 9-pin printers can also look rather dotty.

Inkjets

A better type of printer if quality is the name of the game, is the inkjet device. The principle used in these is a further advancement of the same one used in dot-matrix printers in that the print head produces small dots on the page to create the image (known as a rasterised image). The mechanism used however is very different. Gone are the ribbon and pins and in their place is an ink cartridge that spurts tiny dots of ink on to the page.

Nowadays, there are two popular types of inkjet printer. The black and white one and/or a colour model. Black and white printers use only a black print head to create black and greyscale images on the page. Some of these black and white printers (a DeskJet 600 for example) also allow you to replace the black cartridge with a three-colour one (cyan, magenta and yellow), so you can create colour pages as well.

In some cases, three-colour printers do not produce colour output as good as a colour inkjet which uses a three-colour cartridge in combination with a separate black one. This is known as a four-colour printer.

Lasers

The third type of printer is the laser. The technology used in this again, is based on the same dot-matrix principle of black dots forming an image on the paper. In this case, the black dots are made up of toner fused on to the page. The smaller the dot the laser can produce, the sharper the text will be and the more shades of grey the printer can reproduce by a process known as dithering. This dot size is measured by the term 'dots per inch', or dpi for short. The higher the number, the better the resolution.

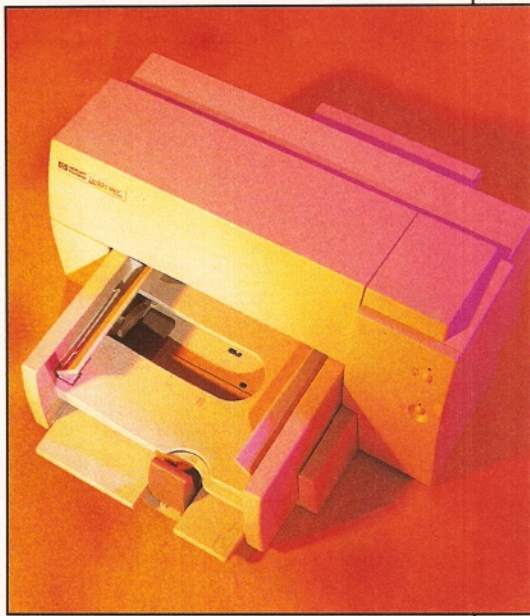
Most laser printers are black and white, although if you have a large enough bank account, you can get colour lasers too. Generally, lasers produce output that is more durable than that from inkjets. You can also produce lots of copies much quicker on a laser than you can with an inkjet. This lets you use the laser like a photocopier.

Making the connection

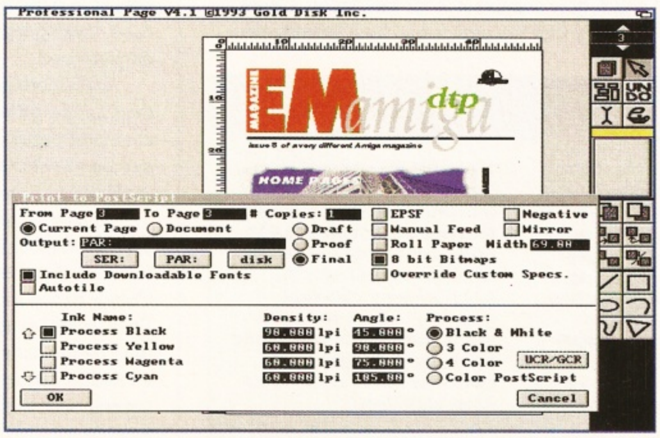
Attaching a printer to your Amiga involves a number of steps. The first is getting a cable to join your Amiga via its parallel port to the parallel port on the printer. The common name for the cable is a Centronics parallel lead. Make sure that when attaching this to your Amiga, everything is turned off.

Once you have the printer attached by its umbilical cord, the next task is to get a piece of software called a printer driver. Many of these

"Buying a printer is one of the most **important** purchases after your Amiga."



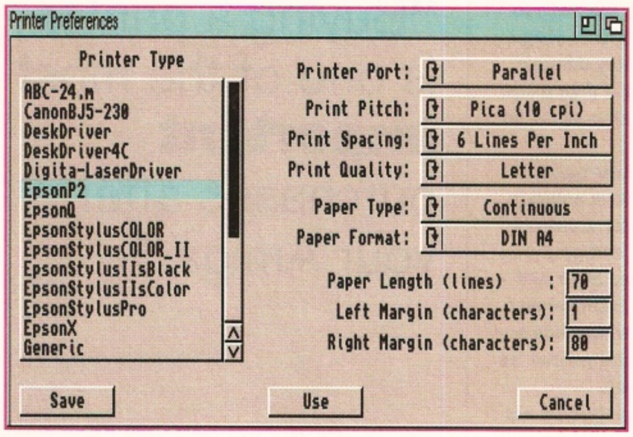
The DeskJet 660C is getting a bit long in the tooth. It's a four-colour, 300dpi printer that is starting to lag behind the opposition.



Because printing from the Amiga takes so long, I use PostScript these days. I can save many hours just for one page.

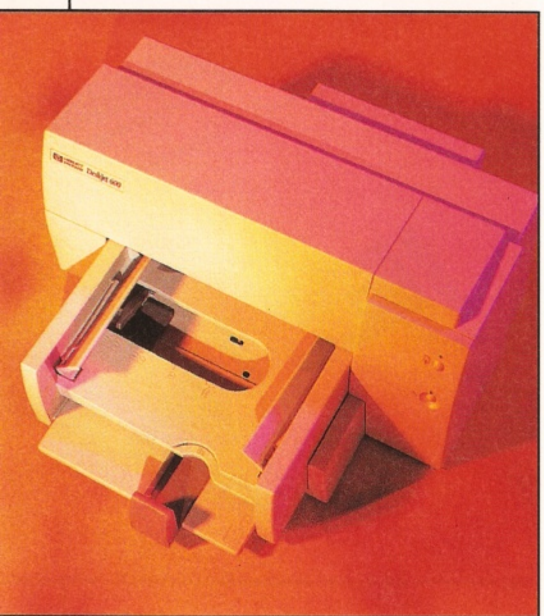
Jargon buster

PPM: (Pages Per Minute): A term used to measure the speed of lasers and now some inkjets. It's based on how many pages they can output in a minute.
CMYK: Stands for Cyan, Magenta, Yellow and Key (black). The colours used in four-colour printers like the Stylus II and the DeskJet 660C.
Dithering: When a four-colour printer needs to reproduce the thousands of colours present in images and so on, it does this by simulating the colours by mixing the four inks in a unique pattern called a dither. There are many types of dithers, such as Halftone and Floyd Steinberg.



The Amiga printer preferences program is just one of a set of preferences utilities you need to control your Amiga. This one allows you to choose the printer driver for your printer.

> "You will in many cases have to buy third party **software** to drive the printer."



For a good value printer, you don't need to look much further than the DeskJet 600.

come with your Amiga already, but they are generally very old drivers for very old printers. Taking a look at the latest Workbench disks I got with my Amiga Technologies Amiga 1200, the printer drivers supplied still do not support many new and popular models.

This means that if you buy a new printer like the ones listed here, you will in many cases have to buy third party software to drive the printer from your Amiga. In some cases, there are printer drivers in the Public Domain for this, but these do not cure all the ills associated with printing. See the 'What is a printer driver?' boxout in this feature for more details.

Making your choice

Choosing a printer from the ones reviewed here won't be an easy task for you unless you have lots of loot and can afford to buy more than one. This leaves the majority of us out. The starting point in the decision making processing is how much you can spend. Most of these printers are under £500, with some being less than £200.

Next you need to consider what you want to do with the printer by making a list of the type of documents you want to do and matching them up with the most suitable printer. If you want photographic colour pictures for instance, then an inkjet is probably most suitable. If however you print multi-part stationery, then a dot-matrix printer is more appropriate because the pins help to not only make an impression on the top copy, but also copies below that as well (only with multi-part stationery of course). This is why dot-matrix printers are so popular in business.

The final filter (and the most important) for choosing the printer that is right for you is to check how suitable it is for the Amiga. Check carefully that the printer can be fully controlled by your Amiga and don't be fobbed off by sales people who probably don't have a clue. Ask for a sample from an Amiga if in any doubt, or even better, a test drive!

Hewlett-Packard 660C

The DeskJet 660C is a four-colour printer. Like most deskjets these days, the outside case is devoid of controls other than one to turn it on and off, and another to feed the paper. All the other functions need to be controlled by software. Like Studio 2 for example. This is because standard printer drivers on the Amiga don't come with the necessary preferences programs to allow you to control the 660C.

Being a four-colour printer, the 660C contains a black ink cartridge as well as a three-colour one. These can be replaced independently of each other, although because the three-colour inks are in the one cartridge, if you run out of one ink, you have to replace them all.

The quality of the output, even when using an enhancement package, is not quite up to the standard of the Stylus Colour II or even the 660C's bigger brother, the 850C. What tended to drag the 660C down was its greyscale output. The colour pages tended to be quite good for a 300dpi printer but greyscale images were dogged by dark strips across the page from dots in the dither patterns overlapping.

Most of this is down to the way the Amiga prints because when tested on the PC using HP's ColourSmart drivers, the quality of the greyscales improved although they still weren't perfect. Another annoying thing about the 660C is the fact that Hewlett-Packard still persist in putting the power supply outside the case, making it a prime candidate for dropping on your toes.

On a more positive note though, the paper feed for the 660C can handle a healthy 100 sheets of paper at any one time, of which 50 can be allowed to pile up in the out tray before you'll have to clear them.

To sum up, of all the DeskJets, the 660C is the one in most need of an upgrade by Hewlett-Packard. It costs about the same as the Epson Colour Stylus II but can't match it for quality. The DeskJet is essentially a 300dpi printer while the Epson Colour Stylus II is capable of 720dpi. If I had to choose a Hewlett-Packard DeskJet for my own use, then it would be the 850C which was reviewed in Issue 51 of Amiga Shopper. It

Running costs

One of the important things you should look at when buying a printer is the running costs. The cheapest to run is probably the impact printer. Black ribbons for instance can be bought for less than a fiver.

Inkjets are probably the most expensive per page, especially if it's a colour inkjet. This will no doubt change as ink refill systems become more popular. Take it into account if you do refill your cartridges, that many (like the deskJet cartridges) also contain the print head for the printer and these print heads have a limited life.

The printer most people think is the worst for cost is the laser. This is because a toner cartridge and drum assembly for a typical laser can cost around £50. However, when you consider that you can get up to 3,000 prints out of that cartridge, it compares well with the inkjet where a cartridge may only last for 400 or so prints and a set of colour and black ink cartridges cost almost as much as the laser toner cartridge.

is truly excellent value, especially so now that the price has dropped.

Hewlett-Packard 660C

Price:	£335
Supplier:	Hewlett-Packard
Contact:	01344 369 222

Verdict: 86%

Hewlett-Packard 600

Superseding the 540, the new DeskJet 600 is a three-colour printer. With the black cartridge in place, you have a black and white printer, while if you change the black cartridge for a three-colour one, the DeskJet 600 becomes a three-colour printer. As with the 660C, there are only two buttons on the printer with all the functions for the printer being controlled by software.

The quality, it has to be said, was not that different from the more expensive 660C. When you consider the £70 or £80 price difference, that is quite remarkable. The colour output was on a par with the DeskJet 660C which surprised me considering the 600 has only three colours to play with, while the greyscale output too was indistinguishable from the 660C. Not that it was good because as I've already said, it is the greyscale output that lets the DeskJet 600 series printers down. At least on the Amiga anyway.

All this makes me feel that the only real advantage the 660C has over the 600 is that the black and colour cartridges are always in place while if you opt for the 600, you will have to swap cartridges when you want to change from printing greyscale pages to colours ones. With a saving of £70 though, this I could live with. So despite the drawbacks of its greyscale output, the 600 is very good value. For that reason, it gets a higher mark than its more illustrious brother.

Hewlett-Packard 600

Price:	£298 (colour upgrade £28
Supplier:	Hewlett-Packard
Contact:	01344 369 222

Verdict: 88%

Epson Colour Stylus II

This was the printer that got top marks in the last Supertest (AS51). Could it do it again I asked myself as I took the Epson Stylus Colour II from its packing? The first thing I noticed was that this Stylus looked totally different to the old one. A vertical paper path has enabled Epson to create a printer that now occupies less space on your desk.

Also very noticeable was how quiet it is. Maybe this was because the old one was so noisy! Moving along, I was glad to see that Epson haven't followed Hewlett-Packard's lead in removing the control panel. It may have moved to the top of the printer, but it's still there so you can perform the cleaning cycle from the printer itself and not your desktop.

To drive the Stylus II, I had two options. One was Studio 2 (HiSoft ☎ 0500 223 660) and the other a driver from Endicor (Eyetech ☎ 01642 713185). Both give you a lot of control over the output including a load of dithers and a panel for adjusting the colour balance of prints. However, I didn't have enough time to compare the drivers to determine which one performs better than the other.

Another program that can drive the Epson Colour Stylus II is TurboPrint 4.1. This will be reviewed next issue. A couple – and I stress only a couple – of Amiga Shopper readers have said that they are happy with the way the program works with the Stylus. I will bring you a round up of print enhancement packages next month.

The first test I carried out on the Colour Stylus was to print a black and white page of text and graphics and even on plain paper, the result was stunning. It did take two hours to print from a 1200 mind you. I then printed a colour photograph from Studio's picture printing program and again, the results were as good as those I obtained on the previous Colour Stylus. In other words, excellent.

The final test was to print a colour page from an everyday application, and the result was far from satisfactory although this is down to the Amiga drivers I was using and not the printer. Far too much ink is put on to the paper at 720dpi (it's fine at 360dpi) which means you need to make adjustments to the colour balance. Something both Studio 2 and the Endicor driver will let you do.

Be sure to give yourself plenty of time to do the testing to get it right, because with pages taking as long as two hours to come out of the printer, it is a very time consuming process.

In summing up, the Stylus Colour keeps on getting better. It is still the best printer on the

What is a printer driver?

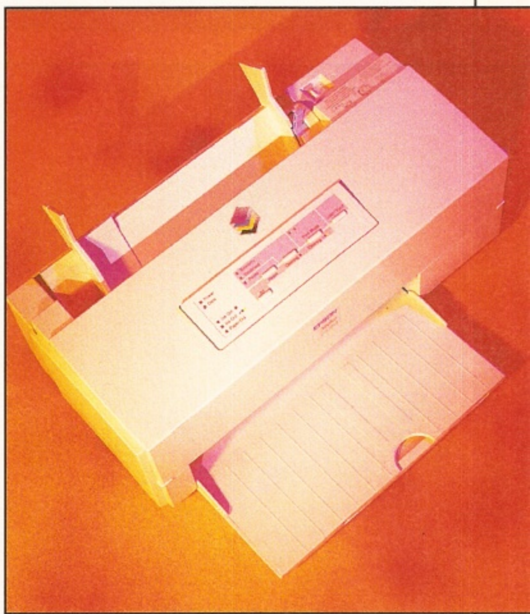
One of the most misunderstood pieces of software on the Amiga is the printer driver. Most people, whether they own a PC or Amiga, take for granted that they can take what is on-screen and print it on to paper. Not so.

There is a lot that can go wrong – you must know the saying; If it can go wrong, it will!

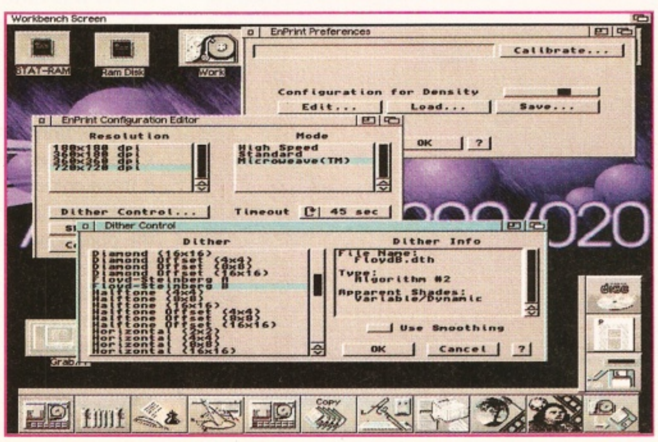
This isn't helped by under-trained (if at all) sales assistants saying, "Here's a PD driver for your printer, it will do". These PD drivers will not always do unfortunately and it is you that suffers with poor-quality output from your new purchase. There is a simple solution mind you – don't settle for second best unless you want to waste your money. This is why:

You have two types of applications on your Amiga. One is text based, the other graphics based. Both require a printer driver for your Amiga so the printer understands the messages your Amiga is sending it.

Most applications will send their output through the printer preferences programs (in your Prefs drawer). So the printer driver you select in the printer preferences program is the one that your applications will work with in order to communicate with your printer.



The champion is the Epson Colour Stylus II. Superb quality with a new face.



EnPrint 2 is a set of programs from Endicor for driving the Epson Colour Stylus range of printers.

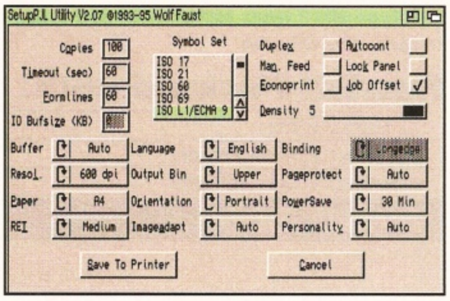
Slow coaches

If there is anything about printing on the Amiga that makes me mad, it's the speed – or lack of it. Especially when you have 10 printers to review! Some of the pictures took more than two hours to print from a standard Amiga 1200, while even those on the lower resolution deskjets still took half an hour.

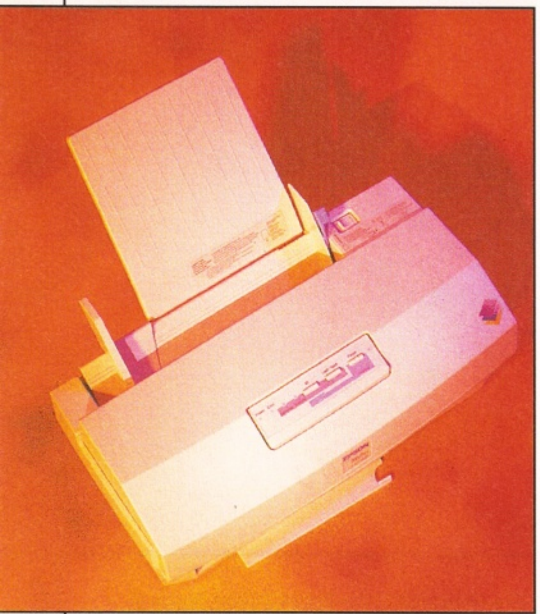
There are solutions, however. Like getting an accelerator for your Amiga. That will help substantially. As will choosing the right setting for a printing task. For example, if you only have black text on the page, then choose the black and white mode from your application. This is because the page will print much quicker than if you select colour or greyscale.

Another option is PostScript. At least it is if you have a laser or high-end inkjet. PostScript printers are substantially quicker than non-PostScript devices. When testing the LaserJet 5MP, the same page containing three bitmap images, some structured drawings and a lot of text, all printed in under 10 minutes using PostScript and almost two hours using non-PostScript.

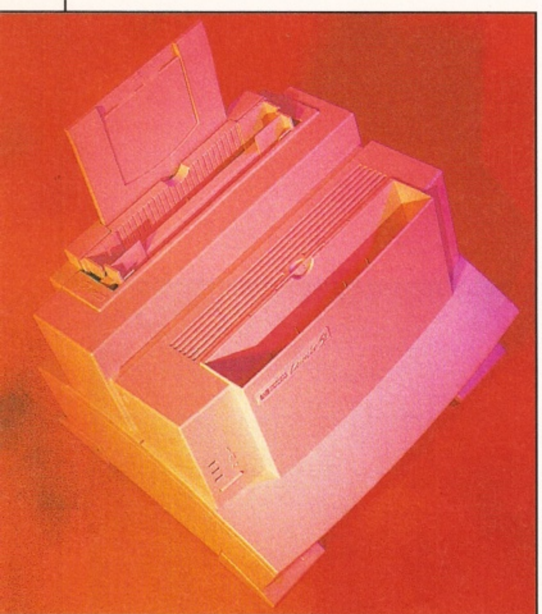
The last option to explore is a package like Protext that prints using a printer's internal fonts. Pages of text will print in seconds and providing Protext has a printer driver for your printer, you can make use of all the printer's internal fonts as well.



Telling a LaserJet 5L how many pages you want printed or what density is to be used, can only be done from Workbench using something like Setup PJL from the Studio 2 printing enhancement package.



The Stylus IIs is a three-colour printer costing approximately £30 less than the Stylus II.



What will £400 buy you these days? Why a 600dpi laser called the LaserJet 5L of course.

market, although I have yet to use the new Canon 610 or Citizen's Printiva, which are sure to give the Colour Stylus II a good shake. Just make sure that if you intend using the Stylus II, you get a proper printer driver for it, as well as some of the special 720dpi paper. Or if you want something that is truly gob-smacking, try out the gloss 'paper' that Epson do. The results are out of this world – but then at almost £2 a sheet, they need to be.

The Epson Stylus produces photographic quality that few printers in this Supertest can rival. We can only hope that the Amiga driver software for it improves so it is easier to get up and running.

Colour Stylus II

Price: £339.99
Supplier: Epson UK
Contact: 0800 289 622

Verdict: 91% **Star buy**

Epson Colour Stylus IIs

This is a new model from Epson and it is aimed at those people on a budget who want a high resolution printer at a good price. The blurb tells me that it's a 720dpi printer and although this may be technically true, the mechanism used is different to the one used by the Stylus II. For those who like the technical jargon, the Stylus II is based on a 720dpi raster while the Stylus IIs is based on 360dpi raster using a 720dpi matrix.

The upshot of this is that when using Studio 2 to drive the printer at 720dpi, the Stylus II persisted in feeding blank pages and the Endicor driver didn't give me a 720dpi option at all. So, unless things change, think of the Stylus IIs as a 360dpi printer.

The other main difference between the Colour Stylus II and the IIs is that the S model is a three-colour or black and white printer. That is, you can print using a black ink or you can swap the print head over and print colour using a three-colour cartridge. One or the other, not both together.

The quality from the Colour Stylus IIs was a pleasant surprise despite only having three colours to play with for colour work. Full colour pages at 360dpi were almost as good as the Epson Stylus II's at the same resolution. With the black cartridge in place, the results were also very impressive at 360dpi, although having seen what came out of its bigger brother at 720dpi, anything less was a disappointment.

With a high street price difference of around £35 between the Stylus II and Stylus IIs, I would be tempted to save a little longer and go for the Stylus II.

Epson Colour Stylus IIs

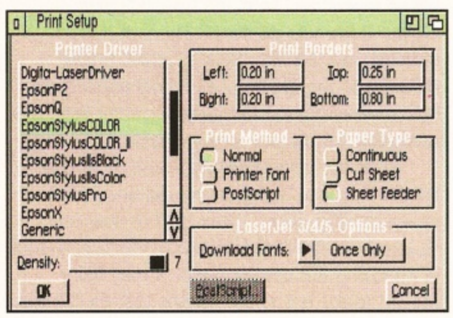
Price: £249.99
Supplier: Epson UK
Contact: 0800 289 622

Verdict: 87%

Hewlett-Packard LaserJet 5L

One of the most popular lasers in the last few years has been the LaserJet 4L. It has now been superseded by the 5L and with the different model number comes a lot of changes. It is now quite an ugly (in my opinion) looking laser with its paper in and out trays pointing up in the air. But here is a classic example of not judging something by its looks.

The 5L is a four-page-per-minute (PPM) 600dpi printer. When you consider that it costs, with Studio 2, less than £460 in the high street, here is a bargain waiting to be snapped up. In the few hours I got to spend with the 5L, I used Studio 2 to help me produce many stunning examples. However, I couldn't help feeling that the results were not as good as the LaserJet 5MP (also 600dpi). But they were far better



It is important to choose the right options from your application before printing. Wordworth is one of a few programs that let you choose the printer driver without going to Printer prefs.

than the 4L and any other laser I've seen priced this low.

The paper feeds in from the top (back of the printer) and is fed out into a vertical out tray (at the front) or if you prefer, this can be changed so the paper feeds out from the bottom of the printer. The feeder, by the way, can handle 100 sheets of 80gsm paper. Unlike the 4L before it, this model cannot be upgraded to PostScript in case you were considering doing that in the future. There is no on/off button either, which I feel is perhaps taking the business of removing buttons from the shell of the printer a little too far. The 4L was also buttonless.

One of the by-products of using vertical feed and out trays is that the 5L has a very small footprint. Very handy if desktop real estate is a little hard to come by. I should also mention that the toner cartridges are very small and I wouldn't be surprised if you get less than 2,000 copies out of them. When you consider that the expected cost of these cartridges is said to be quite high, the running costs may be one of the only down-sides to using the 5L. Hewlett-Packard also look like facing stiff opposition from Epson's new EPL-5500 laser.

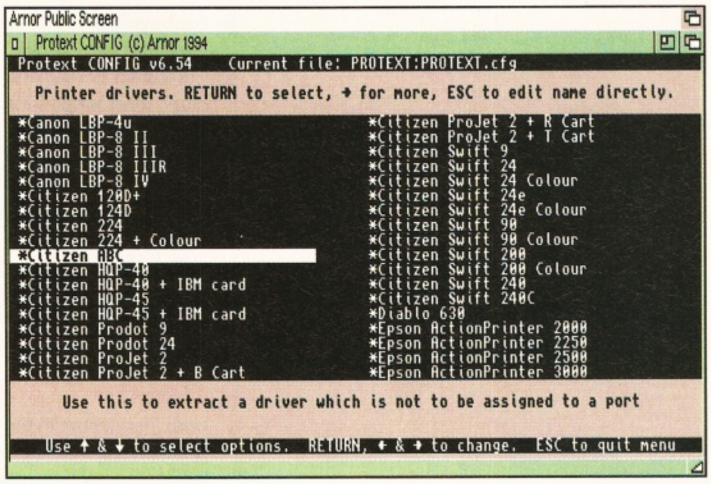
H-P LaserJet 5L

Price: £479
Supplier: Hewlett-Packard
Contact: 01344 369 222
Verdict: 90% Star buy

Hewlett-Packard LaserJet 5MP

If the number of messages I see in user groups on the Internet is anything to go, the 5P series laser printer from Hewlett-Packard is a very popular choice among Amiga owners. Which is hardly surprising if my experience with the printer is anything to go by. The model given to me for review is the 5MP. This is the PostScript version of the 5P, and can be driven two ways. One is by using a software package like Studio 2 or by any application that's PostScript capable like Wordworth or Final Writer.

Protext is one of a few programs on the Amiga that has custom printer drivers enabling you to use a printer's internal printer fonts to help speed up output.



Whatever model you choose, the 5P without PostScript or the 5MP with PostScript, you will need Studio 2 (or similar). This is because the 5 series does not come with a control panel to let you set the various functions in the printer. So when you want to tell the printer the number of copies you require and so on, the only way to do this is to use software like Studio 2's PJL control panel.

The first test I submitted the printer to was printing a black and white A4 page made up of text and photographic pictures. In PostScript mode this took just under 10 minutes to print. Printing using non-PostScript took almost two hours at 600dpi from an Amiga 1200. Not quite as long as the Colour Stylus took for the same image, but still far too long for me.

There are two paper feeds on the LaserJet 5MP (and 5P). One is the cassette which can take 250 sheets of paper and the other is the manual feed which has the capacity to handle 100 sheets of odd size paper. Once a page is in memory, the printer can output them at up to six pages per minute. I found the printer in general managed five per minute. But who's counting?

The toner is delivered from a one-piece toner cartridge and drum assembly. These are good for about 2,000 copies with average real world use and cost around £40. I can't help saying that the LaserJet 5MP is without a doubt ▶



The LaserJet 5MP from market leader, Hewlett-Packard is probably the best value laser on the market with bags of features and quality output.

Printer drivers: doing it their own way

Many publishers come up with their own printer drivers. This effectively means that their program can speak loads of different printer languages without relying on the normal Amiga drivers. A case in point is PageStream. Another is Protext.

But printer drivers are not the be all and end all. You also need a number of tools to help control the output going to your printer. If a picture is too red, you'll need a way to lower the red content in the output. When you want photographic results, you will need dither patterns to help give you such results instead of the poor excuse for dithers that come as standard with the Amiga now.

And then there is the question of controlling functions in the printer that used to be set from a printer control panel but can now only be controlled by software on the Workbench. For all this and more, you need a printing enhancement package. This gives you the type of control over your printer that PC owners take for granted. The difference is that for many printers you'll have to pay for it on the Amiga, while PC owners get it for nothing.

A package like Studio 2 Professional costs about £50 and is the only one available worth considering for the majority of printers. In English-speaking countries anyhow. Amiga Shopper readers in Europe have more choice because there is a German package called TurboPrint 4.1 to consider. (However, Wizard Developments now have this package in stock ☎ 01322 272908, and we will review it next month.)

As well these two packages, there is the Endicor package for the Epson Stylus range of printers. It comes with a picture printing application program and a set of preferences for controlling the output.

"The 5P series **laser** printer from Hewlett-Packard is a very popular choice among Amiga owners."

the best laser for the price I have seen. Text is pin sharp and graphics using Studio 2 or PostScript are superb. My only wish is that I could have slipped Hewlett-Packard my 4MP in exchange for this model.

H-P LaserJet 5MP

Price:	£799 (£999 Postscript)
Supplier:	Hewlett-Packard
Contact:	01344 369 222

Verdict: 93% Star buy

Epson LQ-300

Until the release of the Stylus range of printers, Epson were well known for being one of the leading companies making dot-matrix printers. Since then, the Colour Stylus has taken off in a





Above: ***From one of the most well known companies for pin printers comes the LQ-300, a robust pin printer that can produce almost inkjet-quality output.***
Above right: ***I don't mean this as a put down when I describe this printer as cheap and cheerful. The LC-100 is cheap and will bring a smile to many an Amiga owners' face.***

big way and the pin printer range has taken a back seat. In fact, it seems a lot of products at Epson have taken a back seat to the Stylus such is its popularity.

Epson, however, are still actively making pin printers and one of the best available for the home user is the Epson LQ-300. This is a 24-pin printer which has tractor feed and cut sheet feeder for single pages as standard.

To drive the LQ-300, I used Studio 2 and the results were quite good. I say only 'quite good' because it is easy to run down the quality from a pin printer after seeing the photographic images coming out of the Stylus II, also using Studio 2. What has to be remembered is that this printer sells for around £174, which is about £140 less than the Colour Stylus II. With that in mind, you would expect to lose out in some respect and quality is it.

What you gain however is a cheap to run, colour-capable printer with a tractor feed for extra flexibility in the paper handling department. There is also a 50-sheet cut sheet feeder available as an option. The LQ-300 is a little slow on the graphics printing side but it more than makes up for it with the printing of text being very quick indeed. For those interested, the LQ-300 has a quoted speed of 240 characters per second (CPS) at 12 characters per inch.

Of all the pin printers tested, this was the easiest to get up and running. Thanks to its ESCP2 language, the same as used by the Stylus, driving it was not a problem thanks to Studio 2. My overriding impression however was that impact printers like this really only now enjoy two advantages over other methods. One is price and the other is for printing tractor fed multi-part form paper. When it comes to ease of use and quality, inkjets really are superior.

Epson LQ-300

Price:	£186
Supplier:	Epson UK
Contact:	0800 289 622

Verdict: 85%

Star LC-100

Of all the printers on test here, the LC-100 is by far the cheapest. With a street price of £130, this is a good entry-level printer for those people wanting to do both colour and black and white printing. The LC-100 is a 9-pin printer that comes with a tractor feed as standard as well as a single sheet feeder for working with cut sheet 'copier-type' paper.

Like most printers, the LC-100 does not come with an Amiga driver in the box. You will need to order this from Star (☎ 01277 232036). In the meantime, you can use the EpsonX driver that comes with Workbench. It's stored on the Storage disk.

The printer I'm told comes with both a black and colour ribbon. These cost between £5 and £10 to replace. Setting it up is dead simple, although the way the printer beeps at you every time it wants your attention is a little annoying.

Foreign languages

Think of it this way. Your Amiga speaks one language, while out there in printer land there are hundreds of printers that speak different languages. To get the printer to understand what your Amiga is saying, an interpreter is needed for every different type of printer. That's what printer drivers do.

If you put a box on the page in your word processor, it can't speak directly to your printer to tell it where this box has to be drawn on the paper because the printer doesn't understand your word processor.

This means the program on your Amiga has to send its directions to the printer via a printer driver that changes one set of commands into another that the printer can make use of.

The only exception to this rule is PostScript where hundreds of pieces of software can speak the language of PostScript and equally there are hundreds of printers that can also understand the PostScript language spoken by this software. In that case, a printer driver isn't necessary.



The Citizen Print Manager helps you get the most from your ABC printer.

Other printers to look out for

The printers reviewed here are not the only ones you should look at. In the previous printer Supertest in issue 51, we reviewed a number of machines that stand out and I felt that they deserved another mention in this Supertest. I also want you to be aware of a few printers that are so new we weren't able to get review models in time for this Supertest.

Hewlett-Packard DeskJet 850C

In issue 51, I gave this printer 86 per cent. At that time, with Studio 2 included, this printer would have cost you well over £500. Nowadays, you can get the DeskJet 850C plus Studio 2 for a street price of less than £440. That alone is a worth a few more percentage points. Studio 2 I am told by the author, has also been updated to work better with the 850C, which again means you'll get more from the 850C. As time goes on, this printer is looking more and more like an Amiga Shopper Star buy.

Canon 610

Although from the outside, the 610 looks the same as previous 600



The DeskJet 850C has dropped in price by around £60.

series bubblejets, it's what's underneath the shell that is set to make a big splash. By the time you read this, the BJC-610, complete with a maximum resolution of 720dpi, will be on the streets and taking on the Epson Stylus and the DeskJet 850C. As soon as we get our hands on one, we'll bring you the latest on how it performs with an Amiga.

Other Canon printers worth a look

You might also like to look at some of the others from the Canon range like the BJC-4000 and BJ-200. These are just two Canon printers that are special because they come with free Amiga printer drivers. Not just a driver but preferences drivers that give you full control over the printer. When you consider that for most modern printers you have to buy an enhancement package costing £50, this saving is more than useful. See Issue 51 for reviews of these printers.

Epson EPL-5500 Laser

With the aim of taking the LaserJet 5L head on, Epson have launched a new laser printer called the EPL-5500. This is a 600dpi compact laser. I'm told it is capable of churning out six pages per minute and is PCL5e (HP LaserJet) compatible.

There is also a PostScript model for those wanting quicker output. Another significant point about the EPL-5500 is the use of a separate toner and drum assembly which hopefully will reduce the cost of running it. The price of this printer will be less than £400 and it is already a hot item in the high street. Amiga owners will require Studio 2 for it.

Citizen Printiva 600c

New from Citizen Europe is another real hot printer, the Printiva 600c colour printer that uses a new type of print process called Micro Dry. The folk at Citizen claim that this is a fully photo-realistic colour printer capable of 600dpi as well being able to print foil in gold, silver, blue and red. They also tell me it will print in black at an incredible 600x1,200dpi. How true all this is I won't know until they can give us one for review but it certainly sounds like a cracking piece of kit. Can't wait.

Star LC-240C

This was to be in the main review but because of last minute technical difficulties, it didn't make it. The LC-240C is a 24-pin printer with a built in cut sheet feeder and an RRP of £210. Of the tests we did get to do, the results were encouraging with an Inkjet quality visible in text although I'll reserve judgement on it until I get the drivers from Star.

Like when printing a cut sheet page, after about an inch, the printer beeps to get you to move the metal paper guide on to the paper.

This can be avoided by changing the setting so the page is fed into the printer an inch before you start. That means you will have an inch margin at the top of the page. The quality from a 9-pin printer is quite good, although it hardly compares with what you get out of an inkjet printer. In fact, it doesn't compare at all and although this is an unfair comparison, it has to be made so you have the full picture.

Overall, the LC-100 would make a good first printer for those on a tight budget. It follows in the hallowed footsteps of the great LC-10 which so many Amiga owners grew up with. It also suits the Amiga owner who requires a tractor feed and an impact printer for doing multi-part forms work. Just be sure you're aware that this is not a printer for those who hate noise. One thing it isn't, is quiet. But then no dot-matrix printer is.

Star LC-100

Price:	£186.00
Supplier:	Star UK
Contact:	01494 471111

Verdict: 82%

Citizen ABC

Citizen has long supported the Amiga and continues to do so. They produce a number of printers but few are as popular with Amiga owners as the ABC. This is a 24-pin colour-capable printer that comes with Amiga drivers in the shape of Citizen Print Manager. This is a limited version of TurboPrint that is updated, I believe, by Citizen so it continues to work with the latest printers.

In practice, the driver-come-preferences program works quite well although it does not work in the normal Amiga way. This can make it confusing when you initially go to use it. There is no doubt though that it is effective – as the samples I produced show.

Graphics were not really that good but then that is more to do with the type of printer the ABC is than the printer driver. Simple graphics and text were quite acceptable despite the ribbon having seen better days. With a new ribbon, I'm sure that the quality would have been even better.

Equally impressive was the setting up which is detailed in an Amiga animated help file on the ABC driver disk. This shows lots of things from putting the paper in, to showing how the ribbon is to be fitted. It could do with being updated with better quality images and a font sensitive display, but is useful nonetheless.

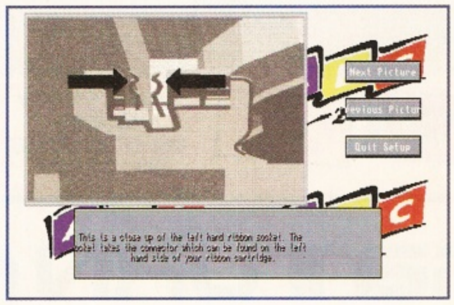
All in all, it's easy to see why the ABC printer is so popular. It is dead simple to set up, has an Amiga driver to make it work with your Amiga and is cheap as well. It can't be too bad having all that going for it.

Citizen ABC

Price:	£149
Supplier:	Citizen Europe
Contact:	01753 584111

Verdict: 85%

Next month we will have a much more in-depth feature on printer drivers. Our March 1996 issue is on sale on Tuesday, 6th February. ■



The Citizen ABC comes with a driver disk containing an illustrated Amiga help file.



The ABC from Citizen is good value for people needing a cheap but reliable printer.

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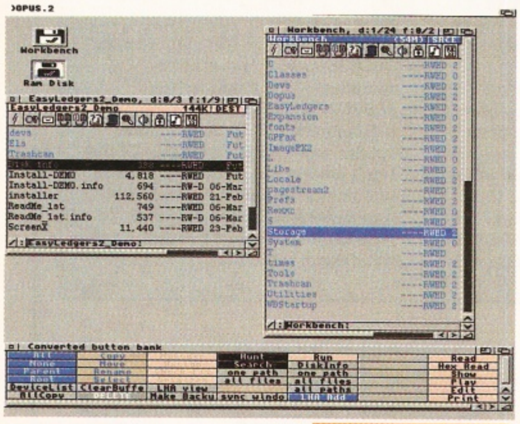
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The main event!



The New Pretender meets the Old Master: which will steal the raytracing crown? **John Kennedy** *is rendered speechless as he compares the contenders.*

Cinema 4D VS Imagine 4

Raytracing and the Amiga seem to have gone hand-in-hand from the beginning of time. If you are as old as me, you might remember when Sculpt4D was state of the art, but as the Amiga has grown in terms of processing power and graphic ability so has the software. Sculpt may be long dead but there are many programs eager to claim the title of ultimate rendering software.

One of the very earliest rendering systems was Silver or Turbo Silver. The name soon changed to Imagine, and almost every Amiga owner has seen or used a version of this program at some point.

There is something extremely enjoyable about creating a scene and then having the Amiga create a realistic image. Fun aside, many users make money from creating animations using the Amiga and rendering software. We all know the Amiga can achieve professional results.

LightWave is considered by many to be the ultimate package, but the high price has kept it out of the hands of the vast majority of Amiga users. Imagine is king in this market, although there are those that eye the crown jealously.

Cinema4D

Cinema4D is a brand new rendering program – at least in the UK – so a few words of introduction are required. In Germany, Cinema4D has been going down a storm for quite some time now, and the various example renderings sneaking over the electronic networks have whetted a fair amount of interest. However, it's only now that HiSoft have undertaken the task of translating the program and documentation into English.

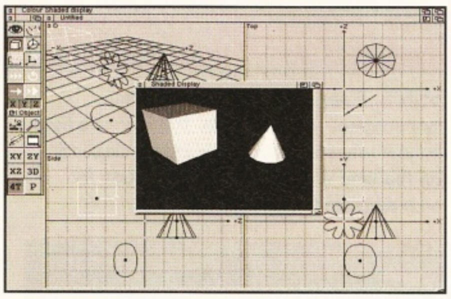
In a welcome break from convention, Cinema4D is by far the most Amiga-friendly rendering package I've seen, and by that I mean that Amiga gadgets and requestors are used throughout with only minor exceptions. The result is a clean, modern-looking interface which takes only a few sessions to feel at home with.

It's also efficient in memory terms, mainly because the raytracing module is a separate program. If you have more than the standard 3Mb you probably won't notice this, but systems with less in the way of silicon implants will be able to cope very much better as a result. The raytracing module can also be used in stand-alone form, driven by simple scripts.

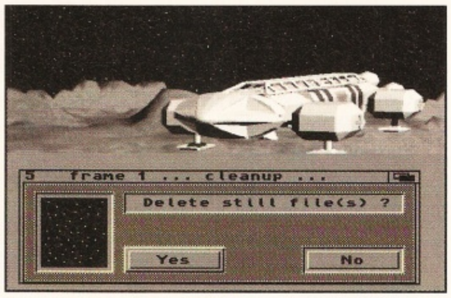
A staggeringly useful option is the ability to skip a scene which may contain an error, which means that when you awake in the morning you won't find your system fell over on frame 2 of a 1,000-frame animation. The separation of image rendering and editor makes it possible for the raytracer to be busy generating images in the background whilst you create new scenes with the editor.

Jargon buster

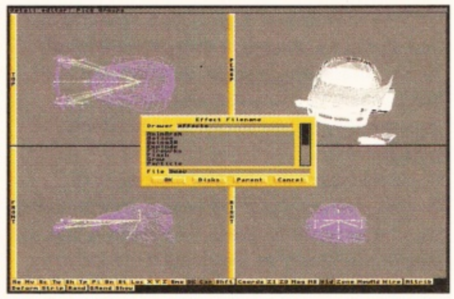
Facet: A triangle: the smallest shape a rendering program can deal with.
Primitive: A simple object, which can be used alone or combined with others.
Rendering: The act of creating an image from a set of data held in memory.
Raytracing: Using the laws of optics to create a realistic image mathematically. Rays of light are traced trough a scene until they reach the screen: if they hit an object on the way they are reflected or absorbed.
Scanline: An algorithm which produces high quality images, but sacrifices some details such as shadows for speed.
24-bit: A 24-bit image can contain over 16 million colours – which is enough to look photorealistic.
Graphics card: Extra hardware for Amigas with Zorro slots. Can display 24-bit images.



With C4D you can switch between main views, or have them all on screen in one split view.



You can see the textures and colours you are assigning to an object in Imagine 4.



Imagine 4 lets you explode a shape and then deal with all the parts separately.

Unlike Imagine, there aren't multiple editing screens to swap between: everything can be opened for you on the one screen. As a result it helps a great deal if you have an AGA Amiga or a graphics card connected to a flicker-free display. The default display is slightly reminiscent of Caligary, but thankfully, it is possible to switch between any of the main views (top, front, side) or have them all on-screen in one split view.

Like Imagine (but unlike Real3D, for example) C4D is a facet-based system which means that creating realistic models is quite straightforward. Objects can be constructed from primitives, or created from scratch using various tools. One feature which has been taken from Real3D is the hierarchical structure: an object can be composed of several smaller objects which themselves can be objects. This helps in the construction of complex shapes.

Imagine 4

Imagine has been updated in a many ways, both major and subtle, since version 3.0. The intermediate releases of 3.1 to 3.3 added a great many very exciting features and fixes, although these were available to those users signed up for the special update scheme.

Version 4 obviously includes these improvements and adds a few important ones of its own. There isn't space here to include a comprehensive list of all the new features, but there's a quick summary in the nearby box.

Many of these features are so obvious that you have to wonder why they have not been done before. Being able to see the textures and colours you are assigning to an object is a giant step forward in user-friendliness and is almost worth the upgrade alone. The only bad news is that you'll need an Amiga which can display 256 colours either in AGA on on a graphics card.

Other additions are more weird and wonderful: "blobs" allow spheres to be joined to produce realistic puddles which can easily be animated. Objects can have the special effects applied to them as tools in the detail editor, which means that you can explode a shape and then deal with all the parts separately.

There are plenty of little things such as previewing images from within Imagine, easy to use default attributes, extra buttons – and of course, an improved Starfield effect.

Imagine 4: new and improved

Imagine has seen many improvements since version 3.0. Many were introduced in the special update scheme for which customers had to pay extra. All of them are now brought together in version 4.

Improvements made in 3.1-3.3

- **ANIM brush and backdrop support**
- **View images and animations from within Imagine**
- **Field rendering**
- **Adjust object attributes from Stage Editor**
- **View from objects and lights**
- **Hires and 256-colour screen display**
- **Quick attribute settings**
- **New attribute mapping types**
- **256-colour texture preview**
- **256-colour render preview**

Improvements made in 4.0

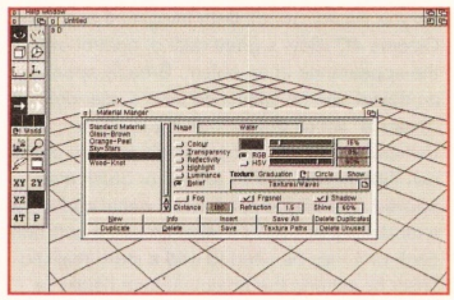
- **Soft shadows**
- **Motion Blur**
- **Blob modelling**
- **Object hierarchy**
- **Use effects in Detail Editor**
- **Smoothing tool**
- **Backdrop images**
- **Fixed starfield**

Feature by feature comparison

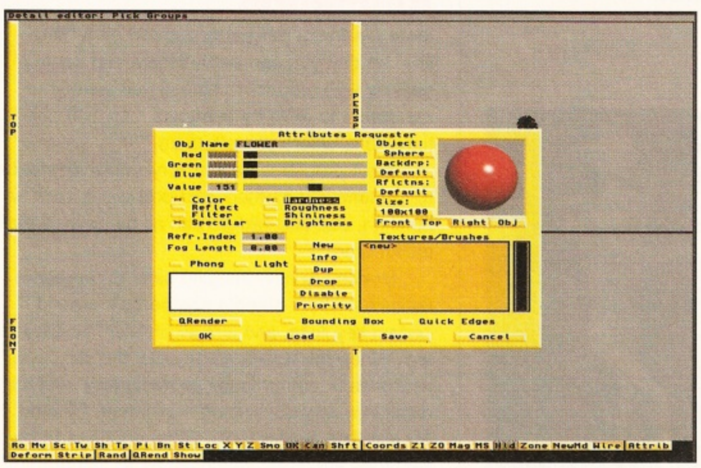
User interface

It's amazing how two programs which are supposed to achieve the same goal can look so different. Imagine 4 still uses the gold-coloured requestors which wouldn't find themselves within 10 miles of the official Amiga Style Guide, whereas Cinema 4D looks very Intuition-friendly. The only exception is Cinema 4D's use of a small dot after a menu option to indicate that holding down the Shift key whilst selecting the option displays a requestor full of extra settings.

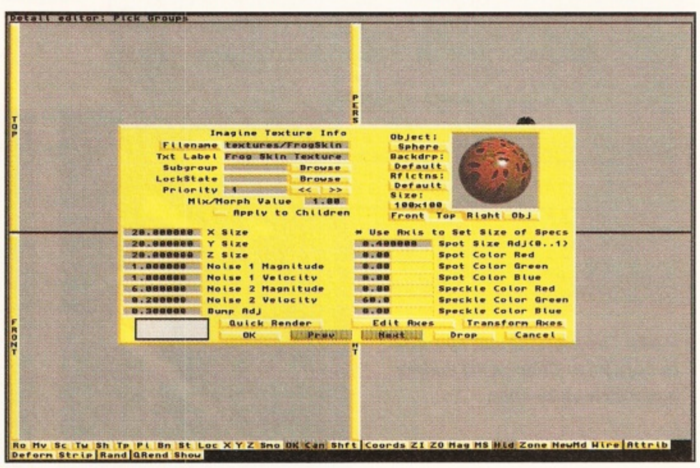
Imagine has always used a multiple editor approach, and although this can (and does)



Cinema 4D has similar modelling tools to Imagine, they can be controlled by a brush map.



Imagine now allows previews of of the material properties and textures...



...when a 256-colour display is selected.

confuse newcomers a great deal I have to say that after a lot of work, it does make a lot of sense. After many years of development, Imagine has so many features that trying to squeeze them all on to one screen simply wouldn't work.

Sadly, for many people, the power of Imagine lies untapped because it can be a real pig of a program to use. It takes a long time to master, especially as the documentation is far from perfect. Imagine 3.0 saw the first really good attempt, but the 4.0 release comes with all the extra features detailed in a text file on the floppy disk. There is nothing for it but to track down and read every snippet of information you can find, and experiment with every single feature. It's the only way you'll master Imagine.

HiSoft have done a good job with the Cinema 4D documentation – they have created a well-illustrated manual with the right amount of tutorials and reference. Getting to grips with Cinema 4D is a lot easier than with Imagine, and within one hour I was animating a moving figure using inverse kinematics. I didn't know what it meant, but it sure looked good.

Material modelling and textures

As you would expect, both Imagine 4 and Cinema 4D allow a great deal of control over the appearance of an object. Broadly speaking, an object can be fashioned from a user-defined "material" which determines if it is shiny, transparent, rough, foggy and so on. The object can then have a further texture or brush map applied. The map may be like a decal applied to a model (for example, a label around a soft drink can), or it may be used to add a more realistic finish by altering the object surface height (a "bump" map) or other physical quantity.

With many years of development behind it, this is one area where Imagine manages to score heavily over Cinema 4D. Both programs allow fine control of the basic material properties, and both allow optional image maps to be used to alter the degree of reflection, transparency and so on. However, Imagine approaches textures in an entirely different way. As well as supporting brush maps, there is a long list of Procedure textures available. Procedural textures differ from the standard image maps in that they have no bitmap image at their heart, and instead are generated purely mathematically.

The advantage to this form of texture is that it can provide excellent results, even when rendered at high resolution. Also, when animated, there are no strange effects due to the finite resolution inherent in a bitmap.

Best of all, unlike a normal image map, Procedural textures consume very little extra memory. Imagine includes a large number of these textures as standard, which make rendering certain objects a great deal simpler.

Imagine also allows many different textures and brush maps to be layered on top of each other. Although each parameter in Cinema 4D may have its own image map to fine-tune it, it isn't possible to have the same degree of control. The lack of Procedural textures in particular is a disappointing in a program of this calibre.

Imagine now allows previews of the material properties and textures when a 256-colour display is selected. You really need to be an existing Imagine user to understand what an improvement this is.

Cinema 4D has similar physical modelling tools, any of which can be controlled by a brush map. Unfortunately, there are no Procedural textures available.

Animation

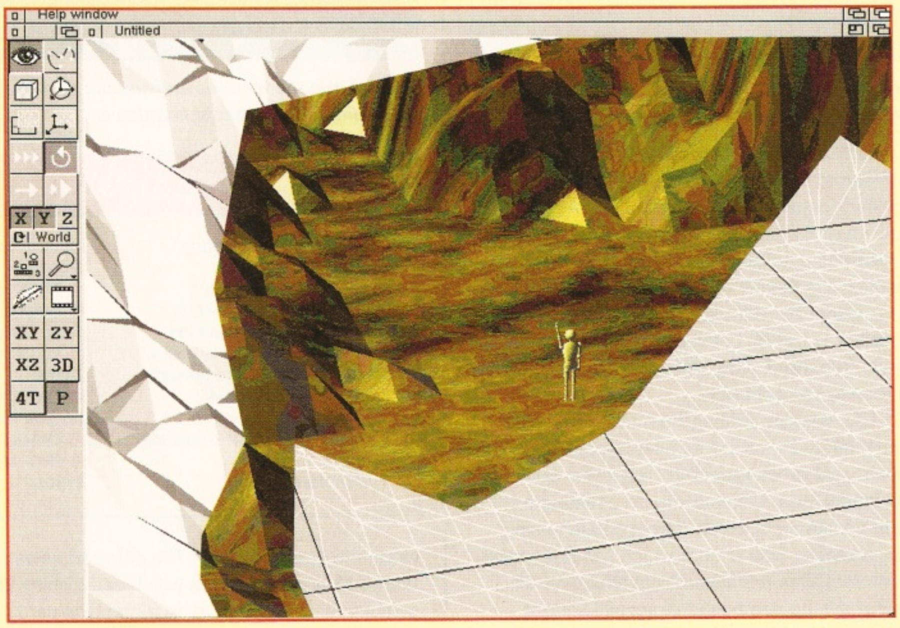
Most rendering programs depend on a "time-line" so that you can easily locate and control objects with respect to time. If you want your car object to drive by in frames 1 to 100, the timeline is where you set them.

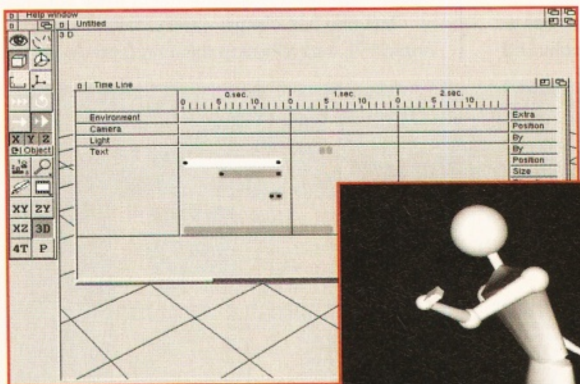
Both programs have a very similar approach to the time-line method, and properties such as position, size and texture can all be defined for each frame.

Bones are how Imagine aims to represent realistic motion: objects can be built around certain key lines, and a layer of "skin" applied on top. When the bones are moved, the skin layer stretches or compresses as necessary, and the result is a very convincing movement. Cinema 4D also has similar tools, although it has to be said they are much, much easier to use that Imagine's bones.

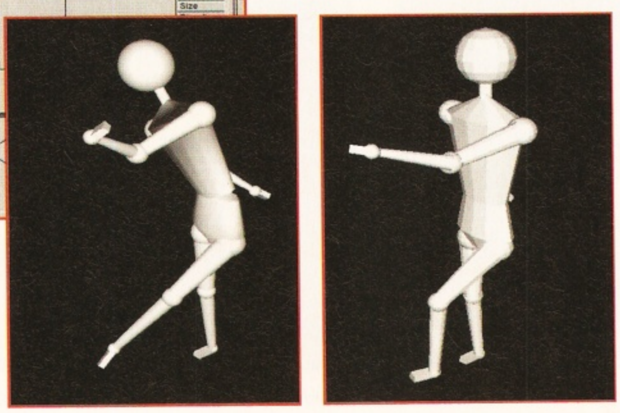
Special Objects in Cinema 4D

Cinema 4D includes several of what it calls Special Objects. As well as the fully-jointed humanoid figure you'll see dotted about the screenshots, these specials include Emboss (for converting a flat IFF image into a 3D object), Fractal (for creating random landscapes), Text and Sun. The Sun is a light source whose position and colour depends on the time entered: a terrific addition for architects and lazy animators.

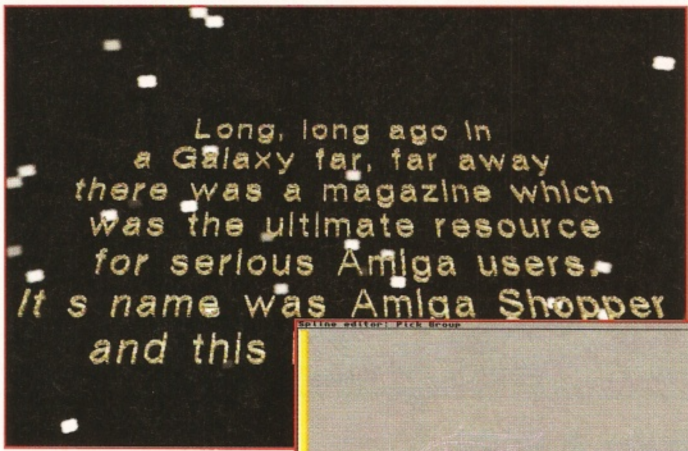




Left: Cinema 4D's tools are a great deal easier to use than Imagine 4's bones.



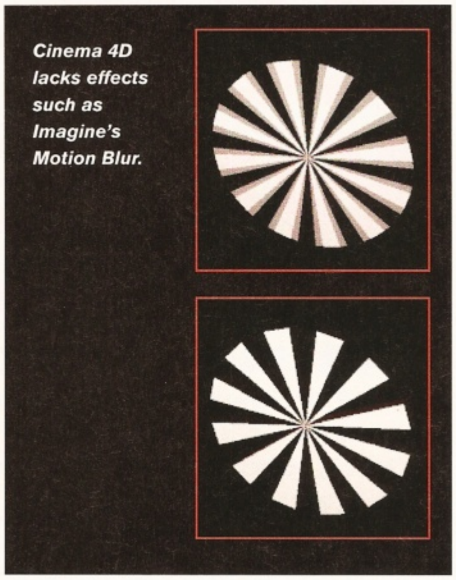
Right: The hierarchical approach to objects in Cinema 4D makes animation quite easy.



Cinema 4D's ability to load in a file of text and convert it to objects can save a heck of a lot of time.



Trying to find a PostScript font which works with Imagine can be tricky.



Cinema 4D lacks effects such as Imagine's Motion Blur.

A familiar time-line approach is used for setting positions and other attributes with regard to time in Cinema 4D. While in Imagine's Action Editor you can adjust almost everything for each frame in the animation.

The hierarchical approach to objects in Cinema 4D makes animation quite easy: even complicated objects such as the supplied figure. The use of "inverse kinematics" means you can position a limb and the program calculates how it got there, creating all the inbetween frames.

Special effects

When animation, you can't beat a good special effect to add interest. Most folks can't resist popping in the odd explosion or two, and making your carefully constructed objects disintegrate is quite straightforward with these rendering heavyweights.

Imagine has been well stocked with effects since version 2, and some of those provided include explosion, rotating, flashing and swelling. The Shredder effect is one of several new inclusions, and this splits the object into random clumps. Also new is the ability to apply these effects at the Object Edit stage, as well as in the Action Editor. In other words, rather than only *appearing* to explode the object in the course of the animation, it really is split into facets.

Cinema 4D also includes special effects: there is an explosion of course, but also an excellent "melt" effect for destroying perfectly good objects and letting them collapse into the ground. There is also an amazing wind effect for creating realistic, fluttering flags.

Effects in Imagine can now be applied to objects whilst they are being edited. So for example, you can destroy someone's head instantly. Take a face object, apply a texture and Spike effect and well, I don't know. It seemed a good idea at the time.

Text handling

I have often though that someone needs to visit Imagine headquarters and explain to them the importance of proper text handling. For a program which is heavily used for creating flying logos and captions, Imagine's text handling has been appaling. Unfortunately, it has stayed exactly the same from version 3.0, which means that you are stuck with the few acceptable PostScript fonts you can find. It's a disgrace: the results may be beautifully smooth, but the supply of text faces which can actually be used is woeful.

By comparison, Cinema 4D only deals with fonts by referring to pre-defined objects. Two character sets are supplied, and others are available from the Public Domain. It's not an ideal situation either, but at least it allows text to be entered from a file and justified in several ways.

Graphics board support

Only with release 3.1 did Imagine wake up to the possibility of a display with 256 colours in it or a resolution which was larger than a hires PAL. With release 4 you can now open a screen of 800x600, or even 1,024x768.

Unfortunately, graphics cards other than the mythical Firecracker are not explicitly supported, but it is possible to convince Imagine on a Picasso if you don't mind the occasional line vanishing and non-functioning Quick Renders.

It's a shame considering that anyone who is heavily into graphics on the Amiga will almost certainly have invested in some video hardware.

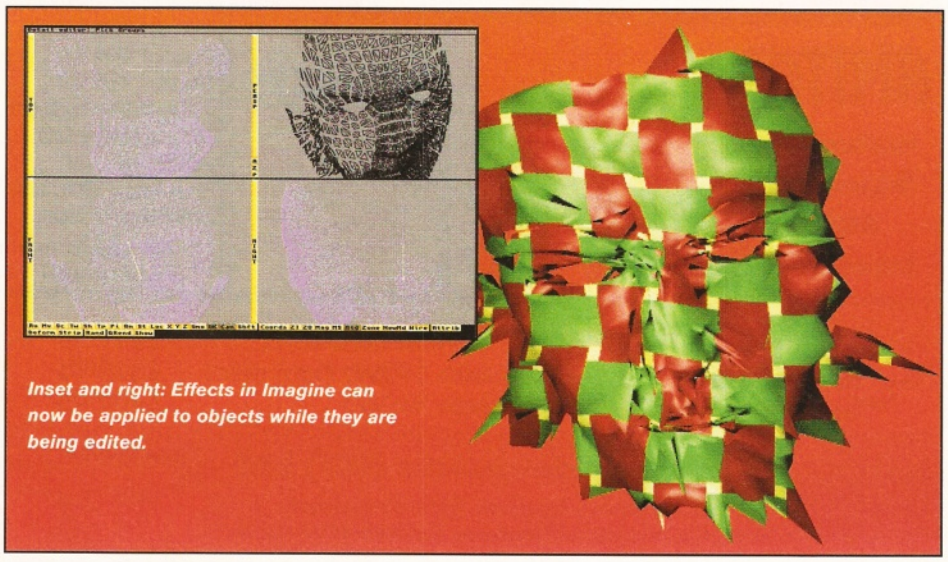
Cinema 4D is totally graphics card-friendly. You can open the main screen on Workbench or a private screen chosen from the standard screen mode list, but you can also generate images for specific modes. Each rendering mode can have its own screen display: and that includes on a private screen or as a window on the editor display.

Rendering

Rendering modes are virtually identical in both packages, ranging from the standard wireframe, solid (shaded or black and white), scanline and full raytrace. Image sizes and aspect ratios can be set to whatever is required, and both will create 24-bit images.

Cinema 4D handles imported images a lot better, with optional background and foregrounds (the latter is especially good for creating copyright messages) and both can be automatically resized if necessary: something Imagine owners still need to do by hand.

The speed of rendering is much the same for both packages. It's hard to create identical



Inset and right: Effects in Imagine can now be applied to objects while they are being edited.

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68000 Processor	£8·00	Printer Cable	£6·00
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Cinema 4D's MagicLink

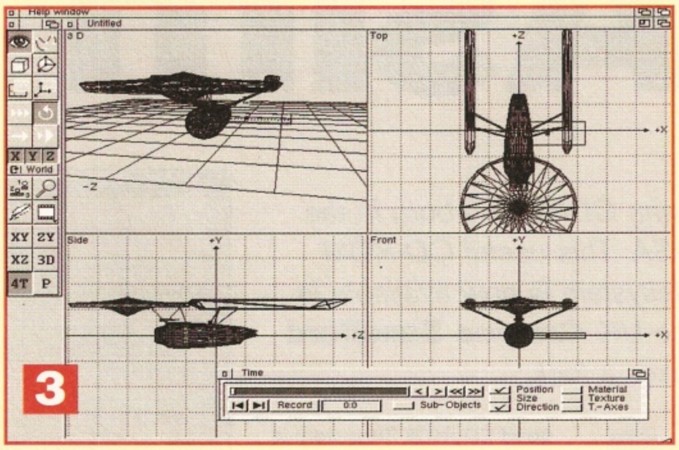
The problem with arriving last on the rendering scene is that your file format is unlikely to become popular overnight. Unlike IFF images, there is no one standard for storing objects and so there's no way to load an object from one program into another – unless you have a conversion utility.

1 Cinema 4D comes with MagicLink lite, a program which can convert objects from Imagine, DXF, Fastray, Pagerender, Reflections, Sculpt, Turbosilver and Videoscape. Not all the objects I tried to convert work, but many of the simpler ones were fine.

2 Take one scanned photograph of an Amiga Shopper contributor and use the emboss tool to create a relief object in Cinema 4D. Then take the photograph again and apply as a colour map. As the emboss determines object height through brightness, the result is not a 3D model of a head, but a grotesque mask. Nice effect though.

3 Setting objects in motion with Cinema 4D is as easy as taking a snapshot in one position, moving the time frame and taking another snap. The program works out the rest.

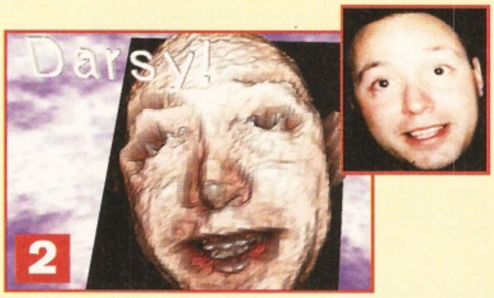
4 The starfield in Imagine has been updated to include points with different intensities. You mightn't be able to make it out from the image, but on screen and in animations it looks a lot better.



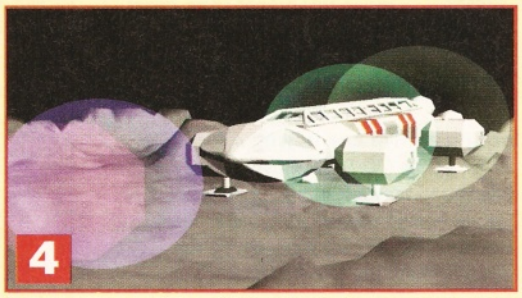
3



1



2



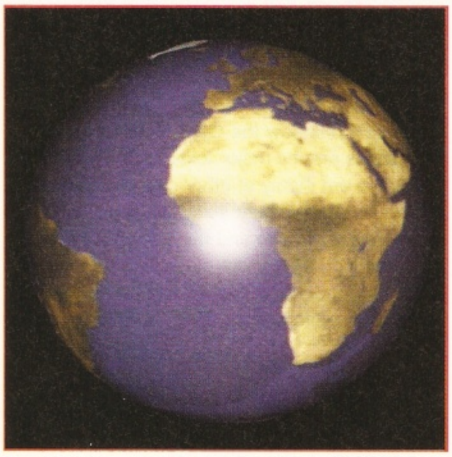
4

scenes and time rendering under identical conditions, but the programs seem well matched. Once I have rendered my Babylon 6 TV pilot, I will let you know. The rendering quality of each package is excellent, and it is fair to say that each system will produce better results depending on the scene in question.

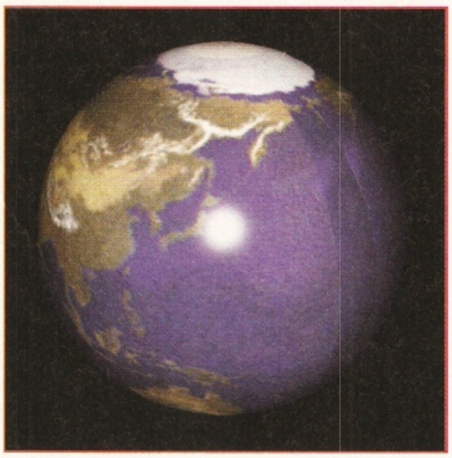
There is little to discern the two images of the world pictured below, for example – both of them were rendered to 800x600 pixels in 24-bit colour in about the same time.

Post rendering effects

However, after the render Imagine will step in with a selection of extra special effects. Lens Flare is something which Cinema 4D lacks, as is Motion Blur. Imagine 4 has included some other effects too for altering colours, but I have to say that I prefer to do this sort of thing in Art Department Professional. Rumour has it that the next release of Cinema 4D will address these shortfalls, although you could be waiting a long time for it.



An Imagine 4 image rendered in 800x600 pixels in 24-bit colour...



...a similar image rendered in the same time in Cinema 4D. There is very little difference!

Conclusion

It was a pretty bloody fight, but only one program can win in the end. Or at least, that was the plan. I was all set to bid farewell to the hours spent in front of a monitor waiting for Imagine to finished rendering, and use Cinema 4D instead, but it is not quite the package to beat Imagine.

Imagine has continued to bolt on more and more features on to its creaking and sometimes quirky frame, but version 4 is an amazing piece of software. The documentation may suck, and I may never fully understand bones, but by golly can Imagine render.

However, Cinema 4D is a valiant attempt. I love the user interface, the support for graphics cards, the special objects (did I mention that you can create a humanoid figure with one menu option?) and the fact that it comes with a manual you can read and a collection of support software unsurpassed. That's why I would whole-heartedly recommended Cinema 4D to those who are new to rendering or who have tried and failed to master Imagine.

However, if like me, you have invested a lot of time in getting to grips with earlier versions, then Imagine 4 is a definite "must have." If HiSoft can provide more bolt-on goodies and upgrades for Cinema 4D I'll be happy to reconsider, but until then I'll stick to only program I know which can delight and infuriate me in equal measure. ■

Imagine 4

Price: £99.95
(You will need to upgrade from Imagine 3 which costs £99.95)
Supplier: Emerald Creative
Contact: 0181 715 8866
Verdict: 92% Star buy

Cinema 4D

Price: £199.00
Supplier: HiSoft
Contact: 01525 718181
Verdict: 90% Star buy

Asim CDFS 3.0

Asim CDFS was born in the USA. This useful CD-ROM filesystem is now available in the UK. **Graeme Sandiford** *takes a look.*

A good CD-ROM filesystem is more important than most people realise. After all, there is more to getting the most out of CD-ROM technology than simply attaching a drive and buying a few CDs.

A complete CD-ROM filesystem should enable you to take advantage of all aspects of CD-ROM technology including data, music and PhotoCD. It should also make things run smoothly without too many incompatibility problem. For nearly 50 quid Asim had better make things run darned smoothly.

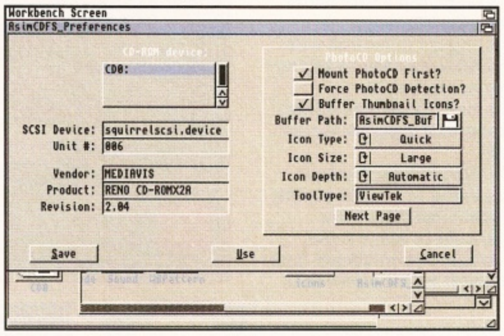
Asim has been around for a while and has been consistently popular in the States, but has yet to break into the UK market. The version of Asim on test is 3.0 and is the most fully-featured to date. It has been designed to work with both SCSI and IDE drives and has been tested with an incredible number of drives which are listed in a text file. However, not all drives have support for all of Asim's features – details of which ones are supported are included in the text file.

Trouble shooter

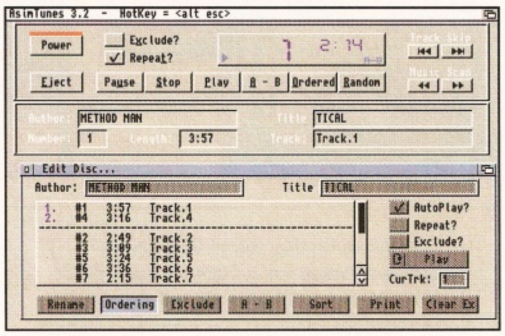
Despite its complexity the system is quite easy to install because it uses the standard Installer utility and it has plenty of advice on hand about how to best configure your system. The script also makes use of a SCSI inquiry tool to help you locate the correct SCSI interface and device number quickly and easily – even for novices. If somehow you still run into trouble you'll find even more help in the manual because it takes you through the whole process.

Once you've installed Asim you may still want to fine-tune it to your requirements which is where the preference editor comes in handy. It enables you to set options for pretty much every aspect of Asim's operation from the mounting of discs to playing music CDs and handling PhotoCDs.

Kodak's PhotoCD technology is of interest to most CD-ROM drive owners and you'll find several PD and commercial utilities for converting these images. Asim's handling of PhotoCDs is impressive. The preference editor gives you a choice of how these discs should be handled; you can have Asim ignore them, recognise them or, as a last result, to treat all discs as PhotoCDs.



Asim's preference editor has a wealth of options. This screen is just one of many.



AsimTunes is an audio CD player which can keep a library of your favourite CDs.

When Asim recognises a PhotoCD or Corel ProPhoto disc it attempts to create thumbnail images to serve as icons as soon as you open a directory containing images. These can be saved to disc so the next time the disc is inserted the icons will be loaded to save time. Asim converts PhotoCD images transparently and on the fly – as soon as you copy an image file it will convert it to a 24-bit IFF file.

Because the mechanisms of audio CD players and CD-ROM drives are essentially the same it makes sense that you can play music on your CD-ROM drive. Asim has its own audio CD playing program called AsimTunes. At first look AsimTunes' interface is off-putting, not to mention ugly, and takes up a whole screen – which wastes precious Chip RAM. Thankfully, this interface can be dispensed with in favour of a minimised strip on your Workbench screen.

The program has just about every feature you could want including several playing modes and a option to choose the CD device you wish to use. An almost essential feature is the library which can be used to store the tracks, playing method and whether a CD should be played automatically. With drives that support the transfer of CDDA data down a SCSI, or even IDE, cable you can use the Amiga's internal sound system to play back tracks.

"Asim's handling of Photo CDs is impressive."



Track conversion

Asim can also convert CDDA tracks directly to IFF samples. As with the PhotoCD conversion this is done transparently – as you copy a file it is converted. Although it sounds like a great idea this can be bit of a pain because you can only convert whole tracks which can be as large as 6Mb+ and so can take a while to convert.

Asim also has facilities for detecting CD32 and CDTV discs and then emulating the appropriate machine at bootup. For CDs that can't be recognised automatically you can use the SimBoot utility which can be executed from Workbench. This attempts to re-boot the machine from whichever CD is inserted.

Another utility is Mounter which identifies the type of CD that is inserted and asks you if you want it to be mounted. Although this seems a bit pointless, it is handy when using multi-formatted discs, such as CDDA and ISO CDs or HFS and ISO hybrids. This feature enables you to choose how the CD should be handled.

Those are the major features of Asim 3.0, but there are plenty of other nice touches too. However, Asim is best suited to beginners who want an easy to use and transparent system. More experienced users may want more direct access to the programs. It's nice to have a fully integrated system, but £30 is more like it. ■

Asim CDFS 3.0

Price:	£49.95
Supplier:	Siren Software
Contact:	0161 796 5279

Verdict: 88%

No 57 & 58, Top Floor
Glasshouses Mill
Nr Pateley Bridge
Harrogate
North Yorkshire
HG3 5QH

Marpet

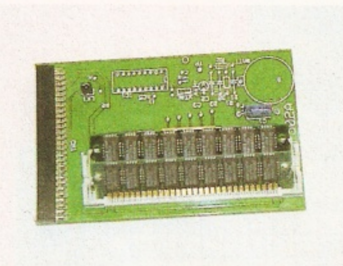
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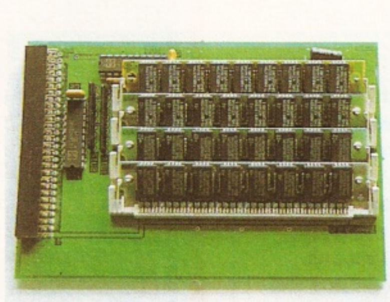
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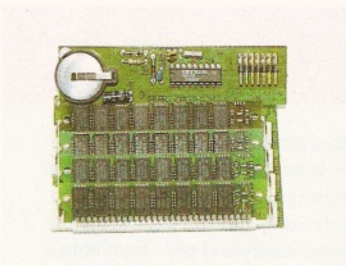


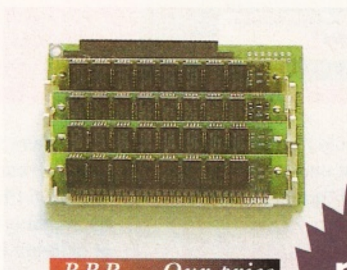
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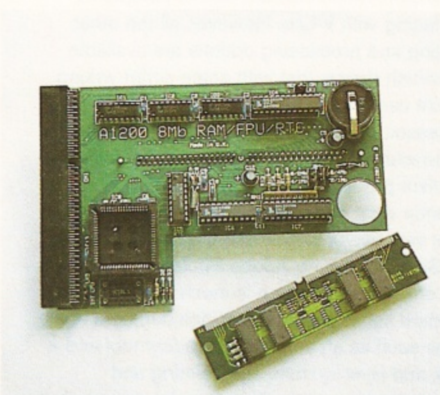
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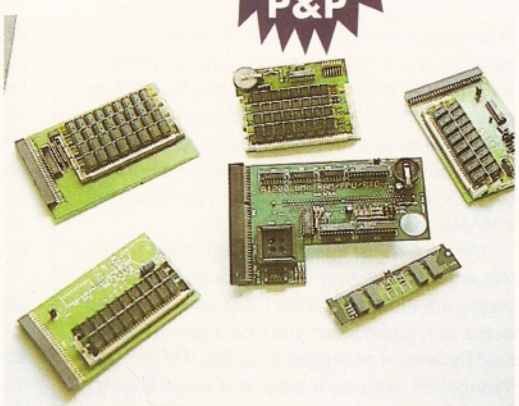




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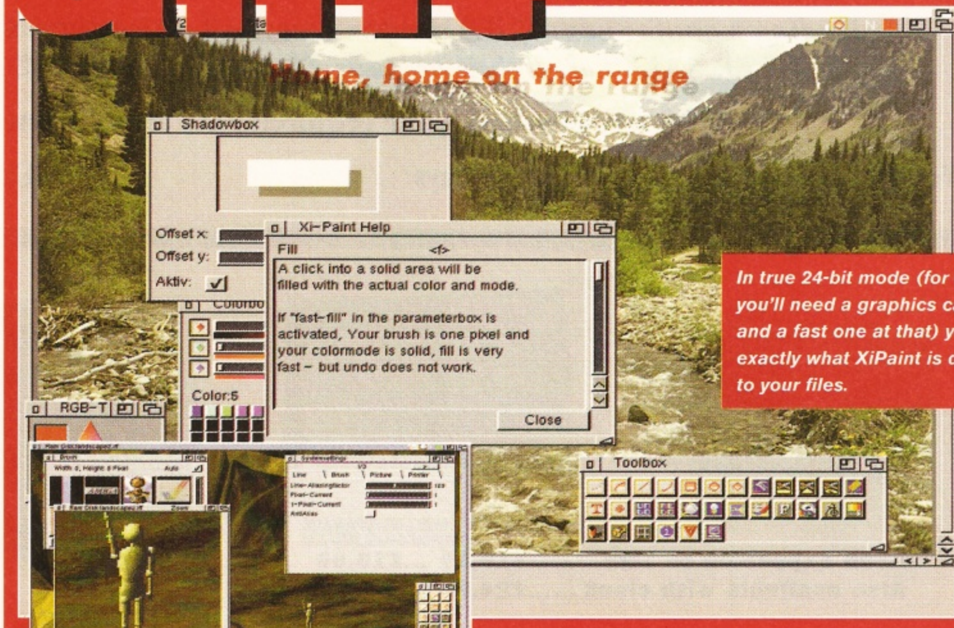
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XiPaint v3.2

It's new, it's shiny and it works with 24-bit graphics and 16 million colours. What more could **John Kennedy** *want?*



In true 24-bit mode (for which you'll need a graphics card – and a fast one at that) you see exactly what XiPaint is doing to your files.

Left: When used on a graphics card, here a Picasso, XiPaint is very speedy. This is 256-colour mode, and it beats the pants off 256-colour Personal Paint on a standard AGA Amiga.

Personal Paint and Deluxe Paint are very useful for dealing with standard Amiga graphics, but the increased use of graphics cards, scanners and image rendering systems such as Imagine and Cinema4D means that more require the tools to edit in a full 24-bit (16 million plus) colour environment.

The competition in the 24-bit paint arena originally consisted of a few quirky programs supplied with graphics cards and the amazing (but expensive) TVPaint. Last year, TVPaint was joined by Paul Nolans' superb Photogenics. Photogenics supports the CyberGFX graphics card drivers, which means that if you are lucky enough to have the hardware you can have a very fast and colourful display which is hard to beat. TVPaint has been recently upgraded to version 3 and it is still a beautiful program to use, but unfortunately is much too expensive.

Now we have XiPaint from MacroSystem: the folks perhaps best known for the V-Lab video digitiser system. As one of the first programs to come on CD-ROM, XiPaint is to be heartily congratulated. Distributing software in this way makes it easier to install and considerably easier to use because the pages of on-line documentation and many example textures are instantly available without wasting a large amount of hard drive space.

Of course, if you don't have a CD-ROM drive you might be less than happy, but anyone who deals with graphics a lot should have a drive high on the shopping list: just under "tonnes of RAM", "faster processor" and "graphics card".



On an A1200 or A4000 you can open screens in either HAM8 mode, or standard mode with up to 256 colours. Window redraws start to slow things down, though – a shame because there are a lot of windows at times.

Graphics hardware optional

Using XiPaint is like using almost every other paint package. You can select the screen mode to be used: if you don't own any graphics hardware you need to use either HAM8 or 256-colour display (anything less and you may be wasting your time with a 24-bit paint program). If you happen to have any of a Retina, EGS, FrameMaster, Merlin, Picasso, VD2001 or any card with CyberGFX drivers, you can smile. XiPaint will work a lot faster, and support 24-bit images on screen. Even in 16 million colours, most graphics cards will easily out-perform 256 or HAM8 AGA modes.

When you first use XiPaint you might be concerned to discover that unless your existing images are stored in 24-bit Deep format nothing seems to happen when you load them. (Deep is used by several packages including TVPaint and Photogenics because it loads and saves quickly.) Thankfully, you can change the default loading module to use datatypes or the multipic library, which means you can load JPEGs, IFFs and almost everything else. Sadly, this fact is buried away in the AmigaGuide documents, so try to remember it when you buy the package yourself.

The file requester occasionally shows thumbnails (I haven't worked how it does this yet), and if I could only remember not to click twice on the files and so accidentally load two images everything would be perfect.

XiPaint feels a little slow, even with a graphics card. It lacks the immediacy of TVPaint and even Photogenics. The brush handling can be irritating too, for although you have keep lots of different brushes handy and pick them from a separate window, they get in the way when you try to select an option from the toolbox.

ARexx port

One of the most interesting additions is the ARexx port which includes lots of options for interfacing with V-Lab. However, all the other painting and processing options are available too, which means that with some script writing XiPaint can double up as a 24-bit batch processor. Another first? There are also plenty of convolution matrices to play with, including an excellent preview image so you can tell in advance what effect your processing is going to have: very useful to animatiors and artists alike.

So XiPaint is no Adobe Photoshop, but it's also only fifty quid which is much cheaper. The standard list of paint tools is included, and some extras such as an automatic Shadow tool and a mask and layer system. The painting and processing tools make it very useful, especially if you have a graphics card, or a V-Lab, or both.

It beats Photogenics in several areas (ARexx macros for example) which will hopefully stimulate Almathera to produce an update. ■

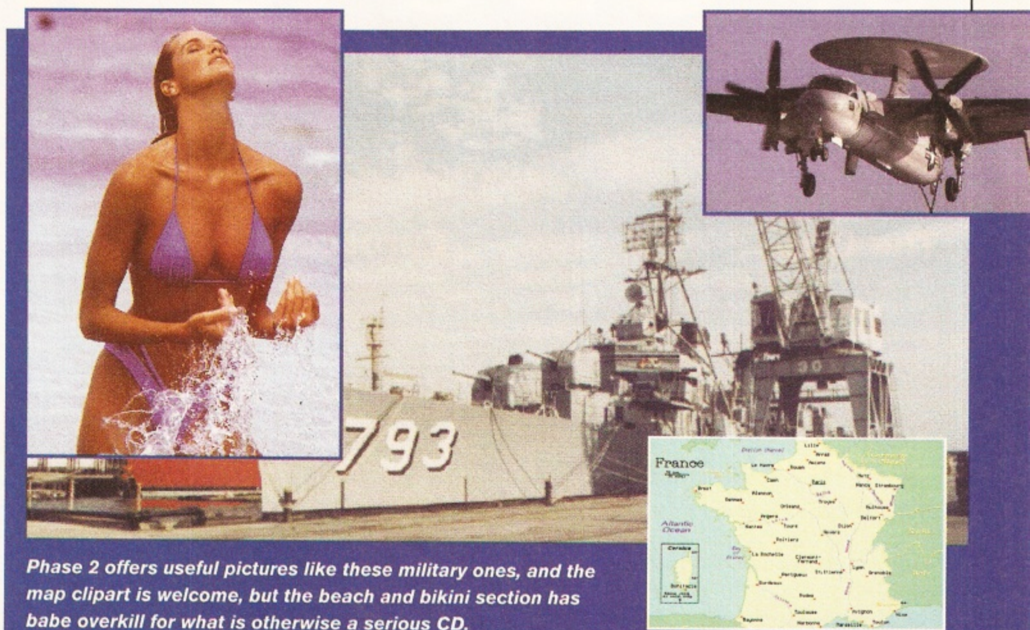
XiPaint v3.2

Price: £49.99
Supplier: MacroSystem
Verdict: 87%

CD check out

David Taylor *unveils two new CD-ROMs that could save you a fortune and reminds you about our competition.*

In addition to reviewing two brilliant CD-ROMs this month, you can try and win a copy of the F1 Licenceware CD and the next volume from E.M.Computergraphic, Phase 3, as well as another three top CDs in our competition over on page 46. Five lucky readers will win over £200 worth of CDs each, so enter now.



Phase 2 offers useful pictures like these military ones, and the map clipart is welcome, but the beach and bikini section has babe overkill for what is otherwise a serious CD.

F1 Licenceware Vol.1

This is the first volume from F1 containing the full versions of their first 100 packages. Considering that buying them separately would cost £500, it's a bit of a bargain, although I doubt that anyone would want to buy every volume. The beauty of this CD is that you know that there will be no duplication of material from other CDs, because Licenceware is fully copyrighted software. The quality of the programs varies, although there are programs on here that have scored very highly.

The CD has been compiled using AmigaGuide and it works very well. The majority of the programs work directly from the CD, but you can also click on a button to un-DMS the program to a separate floppy if you want.

The programs are listed in numerical order and, more usefully, are sorted into categories. There are art utilities, including Blackboard – the fine image processor; sound and music utilities with many modules for programmers to use in their work; educational utilities, which in addition to the usual kids programs have introductions to Workbench, AmigaDOS and AMOS even (oh, and there's also quite a few issues of AMOSzine on here too).

There's a miscellaneous section which has, among others, a personal organiser and an IFF-to-knitting-pattern convertor. (This may sound obscure, but we've had letters asking for one!)

There's also a major section containing Licenceware games, which obviously we don't cover, but you should be aware that this disk contains more than just serious packages. (Some of the games are rather good, by the way.)

Some of these packages are definitely worth having and because this is the cheapest way of buying them, this CD is incredible value for money, which outweighs the fact that some of the programs and games should not have ever seen the light of day. There's been a real effort to offer that little bit more with this CD; there's a few other exclusive titles included, demos of later programs and the CD has been neatly compiled for ease of use. Unlike most PD CDs, when you buy this one you own the software because there are no Shareware fees to fork out, making it cheaper in the long run than some of the £20 CDs. There's no hiding the fact that a couple of programs are under par, but with 100 packages to choose from, you're getting each Licenceware title for an unbelievable 30p.

F1 Licenceware

Price:	£32.99
Supplier:	Active Software
Contact:	01325 352260

Verdict: 90% — Amiga Shopper Star buy

This CD offers full programs at a remarkable 30 pence each.





Phase 2

The second volume from E.M.Computergraphic contains yet more well ordered and presented files. Unlike the first volume, this one centres entirely on data, with images, clipart and fonts. The images are supplied as IFFs in 16 and 256 colours and HAM. They are of acceptable quality and, unlike some pictures on CDs, may be of practical use, although the bikini and beach shots border on overkill. The clipart is supplied in several formats, but is all available as IFFs. There's some colour clipart as well as black and white, and one of the best areas is the Maps section, which has a very useful selection of country maps.

The fonts have been well compiled too, with previews of each available. There are CompuGraphic fonts, colour fonts, Type 1 fonts and also fonts for use with Imagine (v2.9+).

Although the selection is intended to be unique and avoids repetition from other CDs, most people already have as many fonts/clipart as they need, which makes this CD suited to the more serious DTP and DTV user. If you need to ensure your collection is as varied and comprehensive as possible, because you are more than just an amateur, then Phase 2 offers another original collection. ■

Phase 2

Price:	£24.99
Supplier:	E.M.Computergraphic
Contact:	01255 431389

Verdict: 84%

Over £1,000 of CDs to win!

We have another superb competition for you to try your hand at this month. Answer our questions correctly and you could be one of 10 readers who win 5 CD-ROMs each:

The CDs

These are the five CDs that you could win. I think you will agree that they are an excellent addition to anyone's collection:

3D Arena

Almathera

This CD is more than a collection of 3D objects and bitmap textures. It also contains a variety of other files plus some useful utilities. There is something for everyone on here: including the 24Bit Club Scotland's LightWave collection; lots of Imagine formatted objects to render with attribute files, tutorials, utilities, example pictures and animations; plus objects, utilities, animations and tutorials for Real 3D users. This is a cracking collection for the Amiga 3D artist.

3D Arena costs £24.95. Call Almathera on ☎ 0181 687 0040.

Euroscene 2

Almathera

Euroscene 2 is the sequel to Almathera's successful collection of demos and intros from all across Europe. In fact, it contains over 6Mb of Amiga demos and music. They are all archived using standard archivers, such as LHA or DMS, and there are plenty of them on here.

Euroscene 2 costs £14.00 and is available from Almathera on ☎ 0181 687 0040.

F1 Licenceware

Active Software

This CD contains the complete collection of F1 Licenceware titles from F1-001 to F1-100. If you had to buy all the titles separately it would set you back over £500.

The programs include Blackboard 3, Ultimate Quiz 2, Word Plus Pro, PowerBase, Introduction To Workbench, Absolute Beginners Guide To AMOS, plus there are a few games, some clipart for your DTP programs and the AMOS disk magazine, AMOSzine.

F1 Licenceware costs £32.99. Active Software are on ☎ 01325 352260.



The Questions

All you have to do to win all five of these superb CDs is to answer the five questions below correctly and post them to Amiga Shopper at the address shown. Then wait to see if your name is drawn out of the hat after the closing date!

1. What is the data transfer rate of a double-speed CD-ROM drive?
2. What is the capacity of a CD-ROM?
3. What is the ISO standard number for CD-ROMs?
4. Who invented the CD-ROM?
5. What does the acronym CDDA stand for?

How to enter

Write your answers to the five questions on a postcard – or the back of a sealed envelope – and send them to:

Amiga Shopper CD Competition,
Future Publishing,
30 Monmouth Street,
Bath,
Avon BA1 2BW.

The closing date for this competition is: Tuesday, 6th February 1996.

The rules

1. All entries to this competition must arrive by Tuesday, 6th February 1996.
2. Only one entry is allowed per person.
3. Employees of Future Publishing, Almathera, 17-Bit Software, Active Software or E.M.Computergraphic are not allowed to enter this compo.
4. The Editor's decision is final.

The Fifth Dimension

17-Bit Software

This CD contains hundreds of Mb taken from the 17-Bit Software PD library. It is the fifth in the series and contains demos, utilities, graphics, games and music. Because the files are DMS, you need to write to a floppy drive to retrieve the PD disks, and the CD is Workbench 2+ only. The Fifth Dimension costs £19.99 and you can get it from 17-Bit Software ☎ 01924 366982.

Phase 3

E.M.Computergraphic

E.M.Computergraphic is about to release their new Phase 3 CD. The first two CDs in the collection are very good – Phase 1 was reviewed in AS57 and awarded a Star buy (90 per cent) and Phase 2 is reviewed on page 45 of this issue. Phase 3 contains plenty more fonts, clipart and images – we will review this CD properly as soon as it is released.

Phase 3 costs £24.99 and is available from E.M.Computergraphic on ☎ 01255 431389.



talk

LightworX have recently won an award for their amateur video produced using Amigas. **Anna Grenstam** *talks to them about their work.*

There's been lots of good news in the Amiga community lately. In October I went to Bordeaux to see new Amigas being made (AS57). During my tour of the Solectron premises (the company producing the Amiga for Amiga Technologies), many non-Amiga people asked me how a computer could survive for 18 months with no machines in the shops.

"It is all down to the users," I said. Amiga users are loyal, yes, but, most importantly, they have realised that their Amiga does everything that they want it to do and does it bloody well without costing a fortune. Let's face it, no other machine would have survived what the Amiga has gone through in the last 18 months, so it must be special.

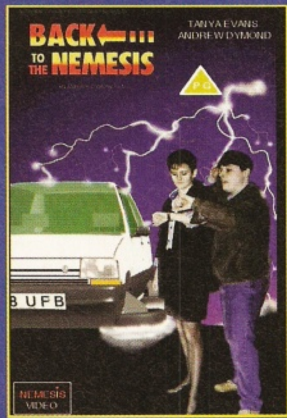
I talked to two of those loyal users for this feature. We received a video and a letter from two amateur film makers in Chipping Sodbury, near Bristol, Gareth Collins and Andrew Dymond. The video had won an amateur film-making award and all the special effects were done in LightWave on an A1200. Creative people using their Amigas in an imaginative and exciting way is something we are always keen to feature, but when Gareth said: "I have even made Andrew's car fly", curiosity took over.

Tell me about your company, LightworX, and what you are trying to build up?

We are in the early stages of doing some market research and getting together a good demo reel. Our goal is to build up a small production house that can handle everything from pop promos and commercial anims right up to film visual effects. We want to build a reputation for producing excellent visuals on a tight timescale and tight budget.

> "We want to build a **reputation** for producing excellent visuals."

How Gareth made a car fly



To make the flying Renault 5 in Back To The Nemesis I had a breakdown of the effects from Andrew. I decided what could be done with computer backgrounds and what needed to be overlaid with video. For most of the shots, the backgrounds were taken from video that was shot on location, then digitised into the Amiga. These backgrounds were then loaded into LightWave and used as a reference for the animation of the car which was entirely computer-generated.

The model of the car was built from reference photos of Andrew's real car in Modeller and contained about 10,000 polygons and some 20 image maps.

The background was then rendered behind the CGI car using LightWave's background feature.

For scenes that required shadows to be cast by the CGI car on the background, polygons in the shape of the buildings and floor were created and front projection mapped using the background picture.

The shadow was cast by a shadow map from a spotlight, matched carefully to the angle and intensity of the real lighting.

Any final touches, such as the time travel effect, were created by hand in ImageFX.

How would you describe yourselves as a business?

We make a damned good team and both have the understanding of the industry and what can and cannot be done. Our motto – to provide the most exciting visuals for the best price, on time, every time. And with a smile!

Can small businesses run from home realistically compete with the "big fish"?

Definitely! They don't have the overheads or inefficiency of large companies and can react quicker.

How do you think you complement each other?

Andrew is the organiser, the driving force. I am the artist. He tells me his ideas and I suggest things that will look good, then we work together on getting the visuals right. We both have an understanding of what makes a good shot and above all, we understand each other.

How did you two meet?

Andrew was running an amateur film group making sci-fi films and spoofs. He was featured on the BBC News West program which did an article on the group and I saw him there. I phoned the BBC and asked for his number since I thought that I might be able to offer some special effects for his films. When I met him, the first thing he asked me was, "Can you make my car fly?"

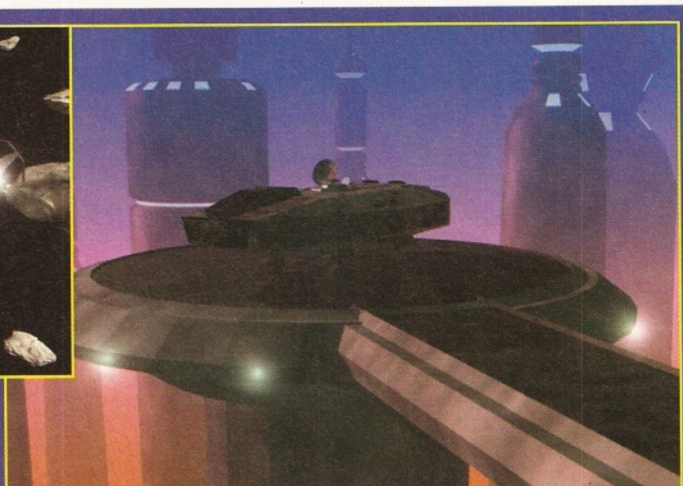
I believe the amateur film society recently won an award for your latest video?

Yes, we are a film society that have been going strong for five years and we have around 30 members who give up a lot of their time and energy to produce high-quality, amateur films. We've had quite a bit of publicity. Wire TV, for example, did an hour-long show where they did an interview with the society.

This year we had this idea that slowly turned into the video Star Runners. It's a 20-minute film with obvious Star Wars influences, where we did everything from acting to filming and creating the special effects.

We were very pleased when it won the Cult TV Best Fan Film and we are still to be presented with the plaque. The jury said



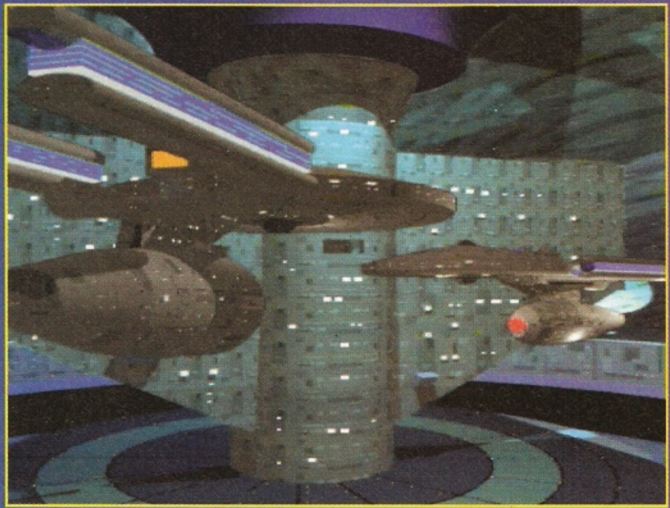


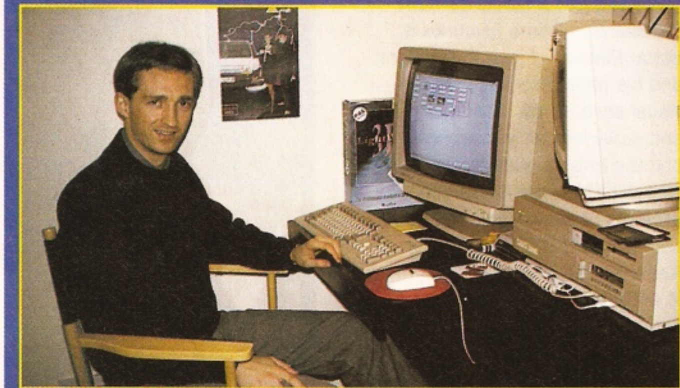
The Star Wars influence is apparent in Star Runners. Even the baddies in the asteroid belt look familiar. As does the city's landing pad.

they chose it for its mixture of sets, the music, the special effects, the computer graphics, the lasers. For an amateur group we were pushing the boundaries to say the least. We wanted to show that a good action film can be done on a low budget.

What's this about a flying car?
It was coming up to the film society's fifth anniversary, so we wanted to do something special. We came up with a Back To The Future idea, with a flying Renault 5. It was really very good, especially considering that we did it in two months.

> "We wanted to show that a good **action** film can be done on a low budget."





The top picture was created using Real 3D 1.4 in several layers on an A1200 and composited using ADPro. Above: Gareth at work.

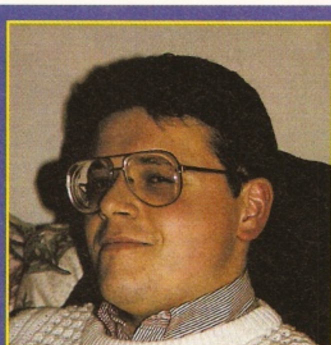
Have special effects taken over from your film making now?
In the last couple of months, we have moved away from the film society and gone into special effects almost entirely. The two are now separate entities and we both feel that we can do so much more than when we started out. Neither of us want to do space stuff for the rest of our lives. Having used *LightWave* for a good while now, we know what it is capable of. I finally got enough money together to buy it and I have never looked back.

What made you interested in films and special effects?
I was blown away by Star Wars in 1977, so was Andrew. Ever since then I have spent most of my spare time making effects films, first on Super-8 with real models, then on video with computer graphics. Andrew got heavily involved in makeup and physical effects. He was planning to make a sci-fi film with traditional models until he saw what could be done with computers.

How did the Amiga fit in?
Gareth: Professionally, I work with computers every day anyway, I'm an IT manager in Bristol. My first A500 I bought five years ago because I wanted to get involved with graphics. I had been making a lot of Super-8 films and tried doing effects on them with real models, slow-motion and so on, but without much success.

No one recommended an Amiga as such, but I looked at everything that was available at the time and it was the best machine to do what I wanted. So I spent a lot of money on my A500 – accelerated it, added a hard disk and so on.





Gareth Collins and Andrew Dymond, the enterprising Amiga enthusiasts behind LightworX.

Andrew: I studied video production where I dealt with everything to do with videos from scratch. That was also when I was first introduced to an Amiga – in a way I have come full circle, because I then used an Amiga for music with a Roland keyboard and I've only recently come back to it. I have to admit that I used PCs before Gareth 'converted' me. I now realise that the Amiga is a lot easier and faster to use. After Gareth showed me LightWave, I fell in love with it.

What Amiga set-up have you got at the moment?
I have an A2000, old faithful, which has 20Mb of RAM, a 28MHz 68040, 1.5Gb of disk space, a Picasso card, a QIC cartridge tape drive, an Exabyte tape drive and a 20-inch monitor. The anims are created in LightWave and loaded into our V-Lab Motion card which plays them back in full 24-bit, overscan real-time.

What piece of equipment couldn't you be without?
V-Lab Motion and LightWave.

If you had the money, what would you add to your set-up?
A DEC Alpha for rendering speed with loads of memory. Software wise, I have everything except a good compositor. There isn't one for the Amiga yet, only Multilayer which lacks a lot of the 'pro' features, i.e. Flame on the SGI.

Would you get rid of your Amiga when the money starts pouring in?
No. I would probably upgrade it a lot and add lots of bits to it, but I wouldn't get rid of it. There is really nothing that I feel I'm missing with my Amiga, apart from speed and hard disk space. Things that you can never have enough of.

What makes the Amiga such a good graphics machine?
It used to be the graphics chips and they are still important, but now it is the sheer flexibility of the computer and its OS. Plus the fact that there are some damned good graphics programs available for it!

Does the future of the Amiga lie in the graphics market?
Yes. It can't compete with the consoles for games and it shouldn't try to. It should be promoted on its graphics abilities now.

If you could make a wish about the specs of the next Amiga, what would it be?
Make it RISC-based. Preferably Alpha, but this will hike the price. Failing that, go for PowerPC – build one of the 64-bit PC graphics chipsets on to the motherboard and upgrade the sound to 16-bit. Use of common PC bits won't harm the Amiga, it's the OS which makes the machines anyway.

Do you need to be a computer wizard to do what you're doing?
You don't need to be a

programming techie anymore. You really need an understanding of the way traditional effects are created and have a good eye for what makes a shot. Don't try and use loads of camera movement and lens flares – it looks like a computer shot. Watch the old effects films and analyse them. New computer animators coming out are artists rather than computer people and that's the way it should be.

"It takes a lot of work and experience to get stunning results."

If you had the budget, what kind of film would you make?
An action film, not necessarily a space film, but definitely action. I've got a friend, Jim Mortimer, who has been writing for *Babylon 5*, *Doctor Who* and *Cracker*. He said that if we ever got a big budget, he would write us a script. I'd love to get involved with a film of a book of his that's a mixture of *Jurassic Park* meets a futuristic world.

What makes a good film?
A film needs a good script – without it, it doesn't matter how many millions you have in your budget. For example, Forest Gump had an excellent script; so many films now are just action and explosive special effects. If you have a good script, the special effects will just melt into and enhance the storyline.

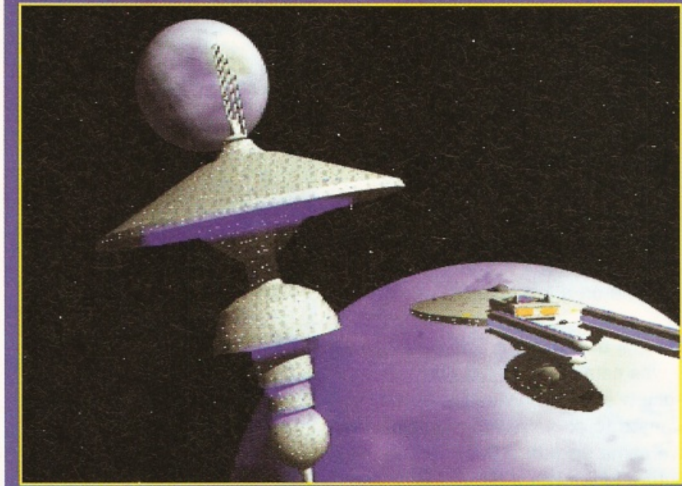
To what extent do you think special effects are a "must" for a box-office success?
I wouldn't say *a must*, no. Effects should not be used *just* to sell a film. They should be used to help tell the story and should be as seamless as possible. Some films have zero-story and loads of effects in an effort to sell. You still need a story.

Today you can make a good film with lots of special effects that no one actually ever notices. For example, the man without legs in Forest Gump – that was a very classy special effect. You don't need massive explosions to make a special effect in a film.

Have you got a favourite film?
Gareth: My all-time favourite is *Blade Runner* – I love Ridley Scott and his photography; I love the visual style. It was beautifully shot and really had an atmosphere, and the effects were breathtaking. *Jurassic Park* was a tremendous example of seamless effects, shame about the story, though.
Andrew: *The Empire Strikes Back* is probably my choice. I went to see that with my nan in 1980 and I remember that it blew my mind totally and I then knew what I wanted to do. More recently, I also liked *Forest Gump*, *True Lies* and three quarters of *Judge Dredd*. The last quarter of that film was very disappointing, but I loved the special effects.

Are you willing to sacrifice your artistic credibility? What if a client comes in and describes what he wants, and you think it's horrific? Would you still do it?
Yes. If someone pays us to do something we will do it. We'd try to give him some artistic guidance and tell him if we don't think something will work. But if the client still won't listen, we'll have to do it his way.

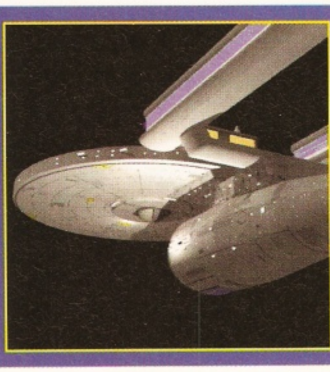
Aren't you ever worried that by starting a small business yourselves you only get to do fairly mundane, low-key, promotional stuff on a small budget, such as company logos. Whereas if you worked for a company, such as Amblin, with huge budgets to back them up, you could be part of seriously cutting-edge effects?
Well, no not really. A lot of people who work on enormous projects, such as Jurassic Park, can feel disillusioned about it because they only work on a tiny part of it. Even if you do small commercials or promos, you still get to be creative and, above all, you're part of the whole creation, not just a single frame for a fraction of a second of a huge film. Working for ourselves, we also have the freedom to do what *we* want to do and have a say in how we approach a project.





The top HAM8 pic was created by Gareth and was released as PD under the Magic Factory banner. Above: LightworX's Amiga set up.





Star Trek eat your heart out! Two more HAM8 pics created in Real 3D and ADPro.

What advice would you give people wanting to get into the graphics/animation scene?
A basic A1200 with 6Mb of memory and a hard drive is adequate for most beginners. An FPU makes a huge difference to graphics software. Software-wise, LightWave is the best by far, but some good stuff can be done in Imagine or Real3D – I have tried them all and LightWave is the only one made for effects work.

However, start with a copy of Imagine, it is much cheaper than LightWave, a bit fiddly mind you, but it's a good package to learn the ropes. A lot of people tend to run before they can walk – they buy a package, plug it into their computer, start running it and expect to immediately get results equal to *Star Wars*. It's a way to get disillusioned quickly. Start with the basics, and build things up slowly – make sure you grasp static images before you move on to animation, for example.

Keep at it. Analyse films and effects; read as much as you can about them and experiment. It takes a lot of work and experience to get stunning results.

Where will you be in 10 years?
We'd like to be doing what we love and be successful at it. It would be nice if we grew big, but not so big that we lose the hands-on approach to our work. We're a really good team and we haven't even come close to hitting our potential yet, so here's to the future. A future for us and for the Amiga! ■

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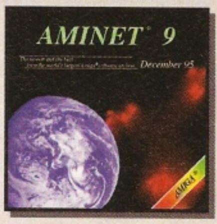
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Terry Richardson from Tadworth in Surrey used his A1200 with Imagine 3 and Photogenics to produce these stunning images. Remember, even if your picture doesn't win here, you may still see yourself in lights because we try and use your efforts elsewhere in Amiga Shopper. If you want to win £25, send your picture as a JPEG to:

David Taylor, Amiga Shopper, Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW.



Moving away from the straight rendered image this month, we were rather taken with the abstract and experimental art of Terry Richardson. OK, £25 might not be the Turner prize, but it's better than nothing.

Anyway, this month our panel of experts have been busy yet again wading through the quagmire that your problems form. In other words, we're answering all your questions for you. I'm off now for another Lemsip. Sniff...



Paul Overaa is our Operating Systems programming expert. He has written several books, including: Mastering Amiga Assembler, Mastering Amiga ARexx and Mastering Amiga C. His main interest is in program design and he is heavily into the music side of the Amiga. Paul's other interests include red wine, maths and wind-surfing!



Gary Whiteley is our expert on video and graphics. He regularly produces work for films and TV. Gary has also written several books on his favourite subjects – amongst them is Amiga Desktop Video, published by Future Publishing (call ☎ 01225 822511 to order a copy). Gary also regularly reviews new products for Amiga Shopper.



John Kennedy is our hardware and music expert. John has written Supertests and features alike for Amiga Shopper in the past, including the CD-ROM Supertest in issue 49 and our monitor Supertest in issue 55. He also put together the Operating Systems feature last month. This month he has written a head-to-head between Cinema 4D and Imagine 4.



Larry Hickmott is our DTP and word processing expert. He produces his own DTP magazine called Em and has written several books, including The Wordworth Companion for Digita and Future Publishing's books division. This month Larry has written the Printer Supertest on page 26, as well as the DTP tutorial on page 67.

AMIGA SHOPPER

Welcome, once again, to the section of Amiga Shopper where we try to solve all your Amiga problems. We have a wide variety of them again this month – but our experts have taken it all in their stride as usual.

A Viper owners comments



In reply to your request for other readers to write in with a genlock/ Viper incompatibility, I am suffering the same problems as Mr. Domanski. My system consists of an A1200 (revision B, made in the UK), 170Mb hard drive (Western Digital Caviar IDE), Viper 1 (8Mb RAM, 33MHz FPU) and GVP's G-Lock genlock, Cumana external floppy drive and Vidi24 Pro video digitiser, all powered by a Datel turbostonker "Goliath" power supply.

My problem began nearly a year ago when I purchased the G-Lock. When rebooting it simply wouldn't sync! I initially thought that my standard PSU didn't have the balls for all the peripherals connected to my Amiga so I bought the Goliath. It didn't solve the problem. I began to suspect that something was clashing, so I removed the accelerator. Same problems, so I tested the G-Lock on a friend's A1500 and it worked fine.

Admitting defeat, I phoned Silica (from whom I bought the G-Lock) and was informed that, as I'd bought my A1200 about a week after they had been released, the first batch of A1200s had some kind of genlock problem specific to the G-Lock. Silica offered to replace the G-Lock with a Fusion genlock but I declined, thinking instead that I would replace the A1200 itself when I could afford it.



The GVP G-Lock was reviewed in our Supertest back in issue 50.

About five months later I bought another A1200. I even took the genlock to the shop and tested it with my prospective new Amiga and everything seemed hunky dory. I swapped all my peripherals over and – same problem. So I tried my original A1200 again – now just floppy based – and it worked perfectly with the G-Lock! So I put the Viper card back in to my old A1200 and was back to square one when the genlock problem reappeared. I then tried the G-Lock on my new A1200 (minus Viper card) and, surprise, surprise, there were no problems with the genlock. So now I was very unhappy. Why didn't this happen when I removed the Viper when I'd first bought the genlock?

What really annoys me is not so much that the Viper card appears to be causing all the trouble, but that I'd saved up half-way towards Harwood's Blizzard 060 accelerator and, after blowing £200 on an unneeded A1200 and £70 bribing the missus into letting me buy it, I'm back where I started – skint.

Anyway, I hope that you all had a good laugh at my stupidity in believing what some sales rep told me on the telephone when I first complained about the problem, and that others will now be aware that it is the Viper that's the problem. Finally, you might be interested to hear that my friend's Rocgen RG300C genlock refuses to work with the Viper as well.

Paul
Peterborough

Thanks for your comments Paul. As a general rule, when I'm stuck trying to decide just what is causing the trouble when I have a problem with an Amiga I usually isolate each peripheral and card on the machine one by one until I eliminate the problem. Then I try to find a solution. It seems that you've discovered this method too, albeit a little too late. Sometimes it just seems that computers just cause more problems than they solve! ***Gary***

Answers contents

If you're looking for a particular problem, this handy index will help you find the questions which concern you:

E-mail from America



I need an S-VHS NTSC genlock for video overlaying. Can you tell me what is available?

Steve Hicks
San Diego (via E-mail)

Steve, I'm sorry that I'm not going to be much help, since the UK and Europe doesn't use the NTSC system (we use PAL) so there isn't much call for NTSC genlocks over here – and hence I don't have much knowledge of what is available. However, GVP's G-Lock can run in either PAL or NTSC, so this might be worth considering – especially since it can handle both S-VHS and composite video signals.

I can't provide much more help beyond suggesting that you check out some US video-specific publications which might deal with Amigas and video, for instance Video Toaster User and any consumer magazines you can find. ***Gary***

Where is it?

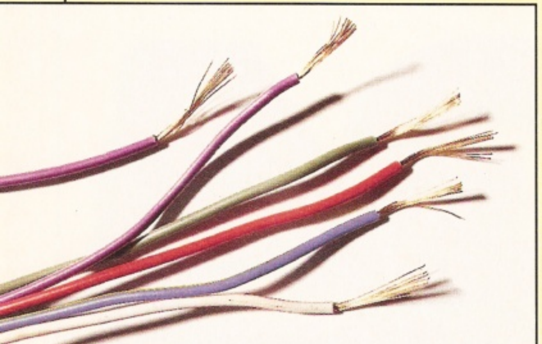


I have just read (over and over) John Kennedy's article in AS56. According to him, Linux is freely available for both Amiga and PC: but no mention of where from, or where to get further information.

Roy Slater

Sorry, in my enthusiasm I left out this rather vital snippet of information. As with any free software you can download it or pay for the media costs to have it delivered to your door.

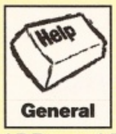
In the case of Linux, you can obtain it from many Internet sites: (http://sunsite.unc.edu/mdw/linux.html or http://www.linux.org)



Check out the in-depth networking feature in our December 1995 issue.

Or get it on CD-ROM. The Meeting Pearls 2 CD-ROM, available from most PD and Shareware libraries, contains the Amiga version. The PC version is available from companies such as Lasermoon (☎ 01329 834944). They also sell a collection of CD-ROMs which includes the Amiga version and other 680x0 versions for Atari STs and Apple Macs. ***John***

Was Gary wrong again?



In response to Daniel White's letter in AS Christmas '95 issue. (Daniel was manually putting an animation together frame by frame in DPaint). The advice was to buy ADPro and ProCONTROL. These programs are of a high quality and are a worthy purchase for sophisticated graphics work, but unnecessary and expensive when just compiling an animation.

When putting together an animation from a series of frames there is no need to purchase any additional program, or write ARexx scripts. DPaint will do the job. Simply load the first frame using Picture/Load and make sure you set the number of frames to however many you have rendered (DPaint V press F1). DPaint puts the animation together automatically, remapping palettes etc. This is time consuming even on my 50MHz Blizzard but at least it is automatic and requires no further input from the user.

Brilliance also has this feature under the Load Animation screen (set the number of files to be loaded). Brilliance is better than DPaint but it uses a 24-bit buffer when doing this in HAM8 and this requires heaps of RAM.

Thomas Krehbiel's Rend24 may also fulfil Daniel's needs but I've had problems with some of the palette functions and its output seems not to be so good as DPaint's.

A. Jones

You're right in principle, but if you read the original question and answer again you'll find that Daniel was already trying to use DPaint to do the conversion and compilation of his animations but was having little success. My initial answer to such a question would have been the same as yours, but given Daniel's difficulties it seemed that a more comprehensive, if more expensive, solution was called for.

To compound the issue, Daniel does not mention which Amiga he is using (though we must guess it is AGA capable if he's using HAM8), how much memory it has etc, what version of DPaint he is using and what format he is saving his Imagine images in (they could be Impulse's own RGBN format 24-bit images, which I don't believe DPaint can utilise).

If, as you mention, DPaint V is capable of all the functions he needs, then I guess that this wasn't the version Daniel was using, otherwise he wouldn't have been having problems in the first place.

Given the above, I've tried to give the best possible answer under the circumstances and I would ask in future that readers make sure they give as much pertinent detail of their problem as they can, including the software version, Amiga specification and any other information which they consider to be necessary.

In conclusion, I agree that Daniel should consider DPaint V or Brilliance as well as my suggestions, but he will have to make this decision alone, based on the spec of his Amiga and the results which he requires. ***Gary***

Needle in haystack



After reading your answer to Mike Lancaster in your Christmas issue regarding PageSetter 3, it reminded me of a similar problem I experienced. When I purchased PageSetter, I had to scroll down the screen and found the CG_Update icon nine inches below the normal bottom of the screen. It seems easy now but at the time I was pulling out what little hair I had before I found the cause.

Mr. I.S. Parsons
Leicester

Thanks for the tip. It is a common problem that many 'lost' icons are in fact just hiding in the Workbench window. On Workbench you can have two desktops if you like. One is the Workbench public screen and the other (sitting on top) is the Workbench window.

Try turning off the Workbench window to find any hidden icons by choosing the Workbench/Backdrop menu item. In fact, for my Workbench where I use a Dock for launching programs, I have to have the Workbench window turned off so I can see the Dock sitting on Workbench. **Larry**



To remove the window around the edge of your Workbench so you don't lose any icons, choose the Workbench/Backdrop menu item and then choose Window/Snapshot all to keep it that way.

More genlock thoughts



This information may be of some interest to other readers regarding the use of genlocks with the Amiga 1200, especially in the light of recent reports about the compatibility of certain genlocks with Power Computing's Viper accelerator card.

I originally had an A500 with a Rocgen Plus genlock, and had heard that the Rocgen Plus wouldn't work with the A1200. I borrowed an A1200, which had a problem with its RF output, from a friend. The video display was "tearing" and this was also evident on the composite video output. However, the video output to my 1081 monitor worked fine, so I tested the A1200 with the Rocgen and it worked perfectly.

Early this year I bought a second-hand A1200 and found that the Rocgen Plus would not work with it! I borrowed my friend's A1200 again (which by now had been repaired) and the Rocgen would no longer work with this Amiga either. Consequently, I sold the Rocgen.

Since then I have upgraded the A1200 as follows: Viper 2 (40MHz 68030, no MMU, 25MHz FPU, 8Mb RAM), Squirrel SCSI with Power X2 CD-ROM, 120Mb hard drive and various other peripherals and software. All these items are running with the A1200's original power supply.

Now I am once more looking for a suitable genlock for my system and I have been following various articles regarding genlock compatibility with the Viper card. I have telephoned Power Computing to see if they could offer any information on which genlocks would be compatible, but they could offer no advice.

However, I got the opportunity to borrow a Rendale 8802 FMC genlock (which is at least two years old) and I can report that it works perfectly with my A1200 set up.

Nick Grundy
E-mail

Glad to hear you've got a genlock working with your Viper, Nick. I note that yours is a Viper 2 card, and that previous queries were concerned with compatibility between the earlier Viper models and genlocks, but it's good to know that the Rendale 8802 FMC works with the Viper 2 card. If only other readers were as lucky as you have been in getting a Viper 2, rather than trying to run their genlocks with the original Viper which seems to have caused them nothing but problems! ***Gary***

24-bit graphics cards for video?



I would like to purchase a 24-bit graphics card but which one? I've read all the reports on the Retina, Picasso II and Cybervision 64 – can you point me in the right direction as to which would be suitable, bearing in mind that I would like to output the results of my work to video tape?

Picasso II seems to be the only one that has pass-through and Pablo to output to video but the Cybervision card is the new kid on the block.

I have an Amiga 4000 (2Mb/8Mb) with large hard drives, CD-ROM and single Power HDDD, a Rendale 8802 FMC genlock, two monitors (a Commodore 1942 as main and a 1084 coupled through my two video recorders).

Paul F. W. Law
Sheffield

Your choice of card also depends on whether you're interested in enhancing your Amiga's display to higher, less flickery, resolutions on your 1942 monitor (which Picasso, Cybervision and Retina can all do). However, if you don't want multisync resolutions, you should consider buying a second-hand OpalVision card, since this will work directly with your Rendale genlock, gives high-quality graphics display (in 24-bit) on a standard 15.6kHz PAL monitor, handles full overscan resolutions, runs most, if not all, of your current software and comes complete with what is still one of the best 24-bit Amiga paint programs around.

You probably won't get a warranty, and you risk trouble if the card goes belly up, but I've seen them advertised for less than £200 and they still represent great value for what you get.

If you want to promote your screens to higher display modes as well as having video output you'll have to look at other cards. Retina has two output devices available (the one for the Z3 costs around £60, whilst the standard Retina encoder is around £120). Actually, I've never seen either a Picasso II equipped with Pablo nor a Cybervision card, so I can't speak from first-hand experience, but in conversations I've had with various people I gather that the Pablo isn't as good as it perhaps should be. I'm told there is provision on the Cybervision card for video encoding, but that there is no release date or a price set for the encoder unit yet.

If you require overscan video (and I think that's likely) you'll be disappointed to find that neither the Retina nor the Picasso can produce overscan video output, which is because these graphics cards are based around PC SVGA chips. I also understand that none of the encoders for these cards work with a genlock.

In each case talk to the distributors or retailers of each card in the UK and ask questions covering the card's ability to produce overscan PAL video output and whether it can be linked up to a genlock (so that you can overlay graphics over video), or will have genlocking capabilities in the future.

A further consideration would be the software bundled with the card. If, for instance, you want to play back Amiga animations you'll need to ensure that either the card can do this itself via specific software or that you can switch back to a PAL video mode (rather than a multisync-type screen display) so that you can play your anims correctly. This is also important for Scala MM300, because it needs to run on a normal 15.6KHz output to be able to interface with video (and indeed work correctly).

The Picasso II can be programmed as to how it promotes each program you wish to use with it and you also can tell it whether or not to promote a program to a higher resolution screen.



One of the best things about the Cybervision 64 is the 24-bit Photogenics preview mode.

If you think that you'll be able to generate 24-bit anims, beware! You'll probably find that, whilst it may be possible with your chosen card, they won't play back at anything like normal frame rates because of the large file sizes and rapid throughput needed to display the hi-res interlaced overscan screens needed for the best TV quality.

To output and compile such animations on video requires VCRs capable of accurately recording single frames under remote control, so I'd guess that your (domestic?) VCRs won't be up to this task.

So ultimately, if your first priority is video output then the only sensible choice (so long as you're willing to buy second-hand) is the OpalVision. If you want multiscan modes as well then you won't be able to have overscan video – it's as simple as that.

Finally, I must end with a shameless plug for White Knight Technology and thank the ever knowledgeable Ian Greenaway for his advice on this subject. White Knight can supply any of the cards (with the possible exception of the OpalVision, though you could ask) you mention so give them a call ☎ 01920 822321 if you still need more information before you buy. ***Gary***

HiSoft BASIC

Coding

I am pleased with the HiSoft BASIC Coverdisk but having bought the manual was disappointed to find that the Object-related commands are passed over because they are explained in the Amiga BASIC manual (which I don't have).

Could you see your way to providing some information, if only briefly outlining the syntax, for these commands, plus the Collision function?

Del Allen
Saltfleet, Lincs

We obviously can't provide detailed examples of every variation of the HiSoft Object commands but here at least are the basic syntax arrangements used:

```
OBJECT.AX object_id, value
OBJECT.AY object_id, value
```

Sets the horizontal and vertical acceleration (in pixels per second per second) of the object.

`OBJECT.CLIP (x1,y1)-(x2,y2)`
This sets the rectangle within which the object will be drawn.

`OBJECT.CLOSE[object_id[,object_id...]]`
Removes given objects (or all objects if none are specified).

`OBJECT.HIT object_id, [MeMask][,HitMask]`
Lets objects pass through one another. This object will only collide with objects whose HitMask when ANDed with this object's MeMask gives a non-zero result.

`OBJECT.ON [object_id[,object_id...]]`
`OBJECT.OFF [object_id[,object_id...]]`
These statements display or stops displaying the given object(s) on screen.

`OBJECT.PLANES object_id[,plane_pick [,plane_on_off]`
Sets the PlanePick and PlaneOnOff masks for a specified object.

`OBJECT.SHAPE object_id1,{string_expression|object_id2}`
Used to define a new object. The easiest way to define these strings is via the HiSoft supplied ObjEdit program.

`OBJECT.START [object_id[,object_id...]]`
`OBJECT.STOP [object_id[,object_id...]]`
These start and stop given objects moving.

`OBJECT.VX object_id,value`
`OBJECT.VY object_id,value`
These statements set the x/y co-ordinate speed of object in pixels per seconds. The function forms of these statements return the current horizontal and vertical speeds.

`OBJECT.X object_id,value`
`OBJECT.Y object_id,value`
Sets x and y coordinates for an object. The function forms of these statements return the current horizontal and vertical positions.

The HiSoft `BASIC COLLISION(object_id)` *function can be used in one of three ways:*
`COLLISION(-1)` *returns the identity of the window in which the next collision to be processed occurred.*
`COLLISION(0)` *returns the object identity.*
`COLLISION(n)` *where n>0 returns an integer which represents one of these cases:*

```
-1  top border
-2  left border
-3  bottom border
-4  right border
>0  the identity of an object with object n
```

Hope this helps! ***Paul***

Blitz BASIC

Coding

In issue 57 a nice, clever reader was about to join the Blitz 2 group of power users (well, I am a Blitz fan) when Paul Overaa said that development was stopped and that Blitz 2 wasn't available anywhere. How can you have given such irritating advice – there is a demo on Aminet (which is not really a demo because you can use the whole power of Blitz except for the 'Save Executable' function), and recently a new release of NewTED has also been put on Aminet.

You may be right that distribution/ marketing are not the strongest parts of Acid Software but new versions of Blitz will find their way on to the shelves, fear not.

Gregor B. Rosenauer
Vienna, Austria

Sorry Gregor, I didn't intentionally go out of my way to upset Blitz users. What I said was that to the best of my knowledge Blitz BASIC 2 was no longer in production and I did of course check with all the main UK suppliers. I know there is an Aminet demo version floating around but what was being asked for was the complete commercial package (with printed manual).

I agree that Blitz BASIC is good, and I know that there is a hardcore of users who feel the package deserves more exposure. It probably does, but to me, no matter how good Blitz BASIC is, this on its own just isn't enough to warrant recommendation. I think the fact that you mention that distribution/marketing are not the strongest parts of Acid Software says it all. Languages do not just have to be good but they have to be available – and seen to be well supported by the trade in general.

If and when the commercial version of Blitz BASIC reappears in the UK then perhaps I'll change my mind. Apart from that I'm afraid I'm sticking to what I said in issue 57! ***Paul***

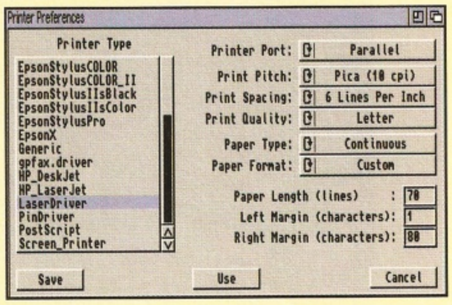
The key to it all

Printers

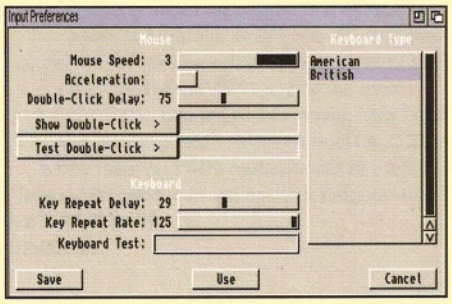
I refer to the answer you gave to PD Sprakes in Amiga Answers October 1995. The last part of his query related to his inability to set both keymap and printer driver.

Although the full details of his equipment were not revealed, I suspect he may be running an A1200 with floppy disks because he refers to his Workbench disks.

When I first bought my A1200 a couple of years ago, I bought a basic model which ran from floppies as well. In the bundle of software I was given, was a copy of an early word processor package called TransWrite (Gold Disk). I played around with this for some while and found that I kept getting odd characters on-screen from certain keys. I found out that this was because I had not set the keymap correctly.



Choose the printer driver you want from those that exist in your Devs/Printer drawer.



Make sure you choose British for your Keyboard Type and then click on Save. The preferences will be saved to the Workbench disk.

However, at that time funds would not allow me to buy a printer, so the word processor package fell into misuse.

When I did finally buy a printer, my problems really started. I could not use it because I could not get the correct printer driver or keymap to install correctly on my working copy of Workbench. The shop from which I bought my computer was less than helpful and the shop from which I bought the printer, even more so!

I noticed that Amiga Format carried an article suggesting that there was a bug in Workbench 3 in that the correct printer driver and keymap could not be installed on floppies but the same problem did not exist if they were installed on hard disk.

I contacted Commodore UK who acknowledged the problem and they kindly sent me a copy of a technical note covering a 'workaround'. This was entirely successful and I encountered no further problems. I am enclosing a copy of this note.

I have now fitted a hard disk in my machine and the correct keymap and printer driver were installed with no problems. I can only urge your enquirer to buy a hard disk if he does not already have one, because it makes the A1200 almost a different machine.

P Lomas

Having not used an Amiga from floppy disk since the late eighties when I first came across our favourite machine, it is easy to fall into the trap that working from hard drive is the only way the machine is used.

Sadly though, many people, through a lack of finances or experience, still persist in using the Amiga without a hard drive. With five Workbench disks required by the 1200, this is more than just a little difficult and we can only hope that one day Amiga Technologies put a hard drive as standard in all Amigas.

As for those notes you sent in, here is an adapted run-down of what they say. Make sure if you work through this tutorial, you are using copies of your Workbench disks and not the originals. You may have trouble getting replacements if you damage the master copies of your Workbench disks.

1. Boot your A1200 with a copy of the Workbench disk. After Workbench appears and the disk drive light goes out, remove the Workbench disk and insert the Storage disk.
2. Double click the left mouse button on the

Storage disk icon and then open the Keymap's drawer. You may need to resize the Storage disk window to see the Keymap drawer or use the scroll bars.
3. Click and hold down the left mouse while the pointer is over the 'gb' icon and then drag the icon on to the RAM disk. Close the Keymaps drawer.
4. Open the Printer's drawer and find the printer driver of your choice. Using the same method as before, drag the printer driver on to the RAM disk. Please note this is the same as opening the RAM disk and dragging a file into the RAM disk's window. Close the Printer's drawer.
5. Close the Storage disk window and remove the Storage disk. Replace with the Extras disk.
6. Open the Extras disk by double clicking the left mouse on the Extra's disk icon. Inside is the Prefs drawer. Open it by double clicking on it.
7. Using the mouse, drag in turn the Input and Printer icons on to the RAM disk. Close the Prefs drawer and the Extras disk window. Remove the Extras disk and replace with your Workbench disk (copy of – make sure the disk doesn't have the name copy_of_ in it though!).
8. Open the Workbench disk by double clicking on its disk icon, then open the Devs drawer.
9. Open the RAM disk and use the mouse to drag the 'gb' icon from the RAM disk on to (note I said on to and not into) the Keymaps drawer inside the Devs window. Drag the printer driver from the RAM disk on to the Printer's drawer icon in the Devs window.
10. Close the window for Devs. Double click on the Input icon in the RAM disk window and highlight the British keyboard type and then click on Save. That's the keymap taken care of.
11. Double click the Printer icon in the RAM disk window, click on the printer driver of your choice to select it and then click on Save.

The settings for this Workbench disk have now been saved with your preferred printer driver and keymap. ***Larry***

Missing library?

General

Digita International have sent me replacement Organiser disks for my A1200. I followed all of the on-screen instructions and everything seemed fine, but when I come to double-click on the icon I get a system request saying 'cannot open AmigaGuide library version 34'. What does this mean?

Kenny Codrington
Birmingham

The Amiga's AmigaGuide facilities need a variety of system routines which are stored in a disk file called the amigaguide.library.

This file should be present in the libs drawer of your Workbench partition (or the disk you boot up from if you haven't got a hard disk machine). You need to first check whether the library is physically present in the libs drawer – you can do this by opening a Shell window and typing:

```
dir workbench:libs
```

Or, if you are booting from another disk on a floppy-based machine by inserting the boot disk and typing:

```
dir df0:libs
```

Either way the command provides a list of all available libraries. If the library isn't present then you'll need to copy it to the libs directory of your Workbench partition (or the libs directory of the disk you boot from) from your Amiga system disks.

If however the AmigaGuide library isn't missing then this would indicate that there is something wrong with your StartUp Sequence. Your Workbench:libs directory should normally be assigned to the LIBS: logical device and you can check this by opening a Shell window and typing:

```
assign list
```

Amongst the entries you should see this line:

```
LIBS: Workbench:libs
```

If you do not see an entry like this then your StartUp Sequence needs to be examined. If you don't feel confident about doing it send me a copy and I'll have a look at it for you. When you write, incidentally, it is important to tell us whether you have a hard disk or not (and if not whether you have one or two floppy drives) because often the instructions we give vary according to the machine you have! ***Paul*** ■

Fill in and get answers to your questions — AS**59**

If you send in a question for the Amiga Answers experts, please fill in and include the form below (or a photocopy if you don't want to cut up your magazine). If you have several questions in different fields that should be addressed to more than one of our experts, please send in your queries on separate forms.

Send your form and question to: Amiga Answers, Amiga Shopper, 30 Monmouth Street, Bath, Avon BA1 2BW.

Name: ______________________

Address: ______________________

____

______________________ **Post code** ______________________

Your machine:

☐ **A500** ☐ **A500 Plus** ☐ **A600** ☐ **A1000**
☐ **A1200** ☐ **A1500** ☐ **A2000** ☐ **A3000**
☐ **A4000**

Approximate age of machine: ______________________

Kickstart version (displayed at the "insert Workbench" prompt)

☐ **1.2** ☐ **1.3** ☐ **2.x** ☐ **3.x**

Workbench revision (written on the Workbench disk)

☐ **1.2** ☐ **1.3** ☐ **1.3.2** ☐ **2.04/2.05**
☐ **2.1** ☐ **3.0**

PCB revision (if known). Do not take your machine apart just to look for this! ______________________

Total memory fitted (see AVAIL in Shell for Workbench 1.3) ______

Chip memory available (see AVAIL in Shell) ______________________

Agnus chip (if known) ______________________

Extra drive #1 (3.5in/5.25in) as DF : Manufacturer ______________

Extra drive #2 (3.5in/5.25in) as DF : Manufacturer ______________

Hard disk: ______________**Mb as DH**______________:

Manufacturer ______________

Extra RAM fitted – type, size in Mb and manufacturer ______________

Please indicate details of any other hardware which could help us to answer your question:

____

Now, use this space to describe your problem, including as much relevant information as possible. Please continue on a separate sheet if necessary.

____

Reader ads

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● **Amiga 1200** system, brand new, unwanted gift. Complete with additional software, top word processor and graphics package, with several games. £365 or £395 with extra floppy drive. ☎ 0181 287 2764.

● **A1200 Desktop** Dynamite pack, Apollo 1230 50MHz, full 68030 50MHz MMU + 4Mb Fast RAM, 250Mb HD, Power CD-ROM, Datel sound sampler. £900 ono. Gary ☎ 01849 468109.

● **Final Copy 2** £30, Proper Grammar 2 £15, two together £40. Mr. Backup Hard Drive back-up system, £5, ☎ 01457 862189.

● **A1200 Microvitec** monitor, 80Mb HD, Viper 4Mb, several games, needs PSU. £800. Phone Llanelli ☎ 01554 751531.

● **Expert Draw** program disk with manual, also the Coverdisk from which the program was de-archived. This Coverdisk also contains a Virus Checker, £5. ☎ 01457 862189.

● **A1200** +MBX1200, 10Mb RAM; maths co-proc; 120Mb HD; 1942 monitor; Vidi 24RT; Handyscan; ImageFX; Typesmith; Audio Engineer; DPaint V; AMOSPro and Compiler; Final Copy 2 and more. Worth £3,000. Sell for £1,500. ☎ 0181 300 7431, 18:30 to 21:00.

● **Modulator, A520,** never used, £15. ☎ 01270 760912.

● **A1200 6Mb** memory, 6Mb hard drive, 10845 monitor, extra disk drive, joystick, mouse, workstation, books, mags, lots of software. £550 ono. ☎ 01752 344939.

● **A500/500 Plus**, 100Mb hard drive, divided into two equal partitions, Workbench installed. Plus DPaint III, Vista, Animation Station, Quarterback Tools, GBRoute, Wordfinder Pro, Interword, Hamlab8, plus BBase, Picture Viewers, two games. £100. ☎ 01457 862189.

● **CD³² games** console, £300 worth of software, two control pads, Parnet cable, titles include: Gloom, Guardian, Universe among many others. Sell for £250, no offers or splitting. Phone Adrian ☎ 01442 397424.

● **A1200 120Mb** hard drive, Blizzard 1230III, 50MHz accelerator with 50MHz FPU, 6Mb RAM, Zappo CD-ROM drive and 14-inch Microvitec multiscan monitor, plus software and games. £900. ☎ 01865 374190.

● **Amiga Shopper's** Complete Amiga C, £20. Intuition – A Practical Amiga Programmers' Guide, £5.00. ☎ 01282 862610.

● **Instructions for** various games included with Amiga packs – award winners (Kick Off 2, Pipemania, Space Ace), Populous (original, NOT version 2). £1 for the lot or 50p each. ☎ 01457 862189.

● **A4000/40**, 6Mb RAM, 405Mb HD, SCSI interface, games, art programs, utilities complete, keys, manuals, £1,225. OpalVision 24-bit graphics board for box Amigas. Cost £365, boxed complete, only £159. ☎ 0181 679 8988.

● **Mega A1200/30** set up: 6Mb GVP + 1.75 Gb SCSI HD, Microvitec multisync monitor and speakers, sampler, Videograb, fast modem, vast amounts software, all manuals and disks. Offers above £650. Call ☎ 0181 941 1009 and ask for Ed.

● **Technical reference** manual for the Tandy dot matrix 240 colour printer. Gives control codes and escape sequences for IBM and Epson configurations. No use to me. Yours for £1. ☎ 01457 862189.

● **Aura plug in** sampler for Amiga 600/1200. Unused gift. Bargain at £45. Phone ☎ 01262 670343, after 6pm.

● **Amiga and PC** using the same printer? HP Deskjet 500 series PC, installation disks, printer drivers and printer software guide for use with Windows. Three disks £3. ☎ 01457 862189.

● **GVP A1230-II** 50MHz 68030 68882 4Mb MMU FPU £250 ☎ 01737 224938. CD³² plus Communicator hardware and software £100.

● **Vidi Amiga 12** AGA and Vista Pro Lite. As new, boxed with instructions, £25 and £15 respectively. Can post at cost. ☎ 01705 479976 (Portsmouth).

● **Amiga CD³²**, SX-1, keyboard, mouse, extra joypad, Network CDS 1+2, Parnet serial leads, six games. Everything boxed. Worth £600, sell for £350 ono. Call Stuart on ☎ 0181 698 4276, after 7pm weekdays.

● **A1200 with HD**, monitor, printer, ext. drive, 200 boxed titles. Selling individually. Send large SAE to Mr. G. Rogers, 24 Northview, Swanley, Kent BR8 7BQ. ☎ 0956 558024.

● **Amiga A3000**, 18Mb RAM, MMU/FPU, SCSI, two hard drives, IV24 card, monitor, loads of software (all manuals). Call ☎ 01271 327020, £1,200.

● **V-Lab Par** digitiser, as new, worth £300, will accept £150 ono. Caligari 24 3D software, as new cost £100, will accept £45 ono. ☎ 01924 862063.

● **Sub Logic Amiga** flight simulation with two ring binder manuals and four disks £30; Trivial Pursuit and Rome AD92 (hard drive install only) £3 each. ☎ 01457 862189.

● **4000/030**, 2+4Mb RAM, 420Mb hard drive, Blizzard 4030 acc board, 40MHz FPU & MMU, excellent condition. Worth £1,650. Best offer £950 to £1,000. All manuals supplied. ☎ 01257 791 705.

● **A4000/030**, 6Mb RAM, 240Mb HD, GVP SCSI controller, sound sampler, optical mouse, loads of software. Amiga in original boxing. Only £800 or best offer. Phone Andrew ☎ 01493 440505.

● **Video digitiser** greyscale (for A500/A500 Plus) £20. Sound sampler with Technosound and Stereo Master software £10. Lightpen £15. Boxed and in good condition. Prices ono. Jeff (evenings) ☎ 01303 243845.

● **A1200, 10Mb** RAM, 250Mb hard drive, 50MHz 68030, 50MHz FPU, ext. high density drive. Loads of software and magazines, two joysticks, two mice. £850 ono. Buyer collects. (Ayr area.) ☎ 01294 463978.

● **Phillips CM8833** Mk II monitor, £115, 1Mb RAM SIMMS (30-pin) -2 for £40. Wordworth v2 £30. Phone Tipu ☎ 01276 678847, after 4pm.

● **Seikosha speedjet** 300 inkjet printer for sale. 300x300dpi, extra memory, very good condition. Only one year old, just bought laser hence sale. Boxed £150 ono. Call Stuart ☎ 0181 698 4276, after 7pm.

● **Amiga 1500+**, 5Mb RAM, Workbench 3.1, A2286PC bridge board, 540 and 105Mb SCSI HDDs, Power HD disk drive, monitor, Star LC10 colour printer, games, magazine, disks, box, tractor paper, £800. ☎ 01206 263160.

● **SNES boxed** with carry case, eight games, including SFII, FIFA Soccer, Mario Paint, World, Allstars, four control pads and a mouse. £160 ono. Ask for James ☎ 01924 281604.

● **Pristine A1200**, 3Mb, GVP 85Mb HD, A1230 Turbo+, CBM 1084S monitor, includes Vista, Vidi 12, Illusions and many other format gold titles. Only £700 ono. Ring James on ☎ 0973 705696 (Hants) asap!

● **GVP GForce**, 40MHz with 4Mb RAM. Hard drive, bracket included, boxed with manual £300 ono. CBM A2620 2Mb RAM, version 7 ROMs £100 ono. Also A1500 WB2. Phone: ☎ 01639 881666.

● **Amitech Hawk** RAM board with 1Mb on board, £50. Selling because of incompatibility with Zappo CD-ROM! Has anyone got a compatible RAM board for sale? ☎ 01946 592496.

● **CDTV and keyboard**, Parnet cable and software, set up to use as CD-ROM for Amiga. Ready to run. Complete with welcome disk, encyclopedia, Sim City, £100. ☎ 01946 592496.

● **40Mb Vortex** system 2000 HD for Amiga 500/1500 only £50. Call for details ☎ 01442 393391, ask for Jamie.

● **Emplant Mac** emulator, immaculate condition, includes latest v5.5 software. £120 or £160 including official Apple System 7.5 software. Phone after 7pm on ☎ 0121 526 5946, ask for Rob.

● **Microvitec 1440** autoscan 14-inch monitor £200. Also AT&T 14-inch SVGA low-rad monitor £130. Will consider 72-pin SIMMS in exchange. Call (after 7pm) ☎ 0121 526 5946 and ask for Rob.

● **Amiga 1500**, 1Mb Chip, 4Mb 32-bit Fast RAM, 405Mb SCSI drive, OS3.1 upgrade fitted and GVP 030 accelerator with FPU, games and joystick £395 ono. Tel: ☎ 01827 715193.

● **Hawk trapdoor** 4Mb upgrade PCMCIA. Compatible with clock and FPU socket. Cost £195. See working £140. ☎ 01926 335458.

● **60Mb 2.5-inch** hard drive for A600/A1200, cables, instructions (60Mb) and software. £45 ono. Call Richard ☎ 01476 65980.

● **Supra 288 fax** modem with Internet and BBS software, GPFax software, Internet Yellow Pages, collection of Internet magazines and directories, boxed, £140 ono. Phone: ☎ 01538 381103, after 6pm.

● **DICE 3.01** original disks and manual, only a few weeks old, £80. Phone Dave ☎ 0161 337 9601.

● **68040 accelerator** for A2000,

28MHz, 4Mb RAM, £300 ono; Picasso 24-bit graphics card £150; GVP HC8 SCSI card for A2000 and A4000, 0Mb RAM, 120Mb disk £100. Phone ☎ 01454 326548.

● **A1200,** GVP 40MHz 68030/68882, 8Mb Fast RAM, 428Mb HD, Zappo CD-ROM, Vidi 24RT, mono hand scanner, double external floppy, CM8833 monitor, boxed, Imagine 3, Vista Pro, £1,100. Phone Mark ☎ 01736 754897, evenings.

● **Blizzard 1220/4.** Turbo memory board, originally £229, sale for £100. ☎ 01234 271022, ask for Matthew after 6pm.

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WANTED

● **Amiga contacts.** I am trying to put together a comprehensive worldwide list of Amiga contacts. I need information on people with Amiga-related home pages on the Internet, or who can send me Amiga-related articles. E-mail Richard Martin at: R.D.Martin-CSSE94@cs.bham.ac.uk

● **Blitz BASIC 2**. Must be in good condition. Will pay good price. Contact Paul on ☎ 01222 706466. (Cardiff.)

● **Does any reader** know where I can buy clipart containing Masonic symbols suitable for Amiga or PC? John Mitchell, 141 King Street, Castle Douglas, Scotland DG7 1DX. ☎ 01556 502456. Thank you.

● **Wanted.** Games, educational software for Commodore Amiga CDTV. Please send catalogue and prices to: Eduardo, Upton Wold Flat, Moreton-In-Marsh, Glos GL56 9TR.

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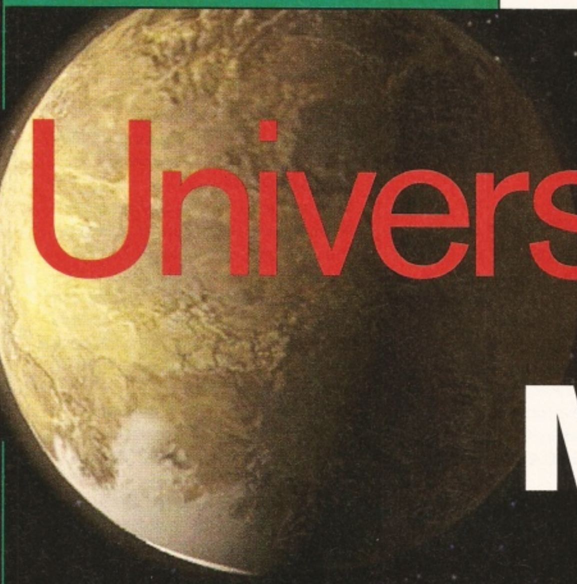
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Universe-o-matic

Part 2 Magrathea

Last month we left you half-way towards creating your own, private universe in LightWave. Overtaken by an extremely generous mood, I decided to share the secrets of Foundation Imaging's work on Babylon 5 for mere cash. By the time you finish this tutorial, you should be able to create the heavens and Earth, a definite ice-breaker at parties!





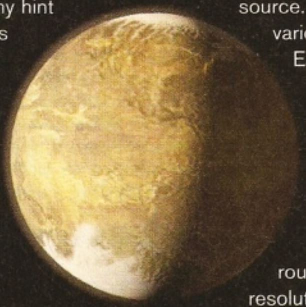
Planets for peanuts

One of the easiest objects to make is a planet. The modelling is particularly simple: choose Sphere from the objects menu and drag one out. I suggest going for 64 sides, which will insure smooth edges and avoid any hint of the straight lines you sometimes see when getting too close to round surfaces. Once you've done this, save your object and move along. You're finished!

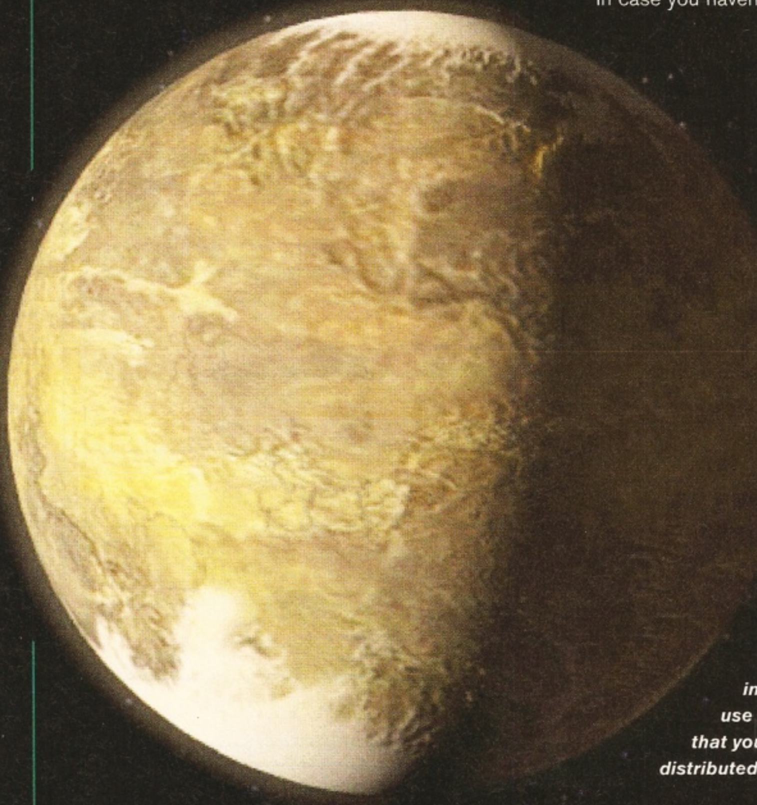
In case you haven't guessed by now, the secret to a good planet has nothing to do with modelling – it's all in the texture mapping.

The planet that comes with LightWave is created entirely with fractal textures – procedural images that are mathematically generated. These can withstand close scrutiny without losing resolution and are very easy to use – just study the object's surface settings to understand how it was created.

However, for a truly realistic-looking planet, you'll need to create an image map for the sphere. It should be rectangular (lengthwise) and look like a planet's surface from space – complete with land masses, oceans and the veins of rivers. Of course, the easiest thing to do is simply scan an image from an appropriate source. Environmental books, as well as various, large photo journals of the Earth, contain many spectacular images of our planet from high above the surface. These pictures make excellent sources for planet maps, and can easily be manipulated in a paint program to create exactly the look you're after.



If you're going to go this route, try to scan in the image at a resolution of at least 1K by 1K – any smaller and the map will become pixelated if you try and get too close to the object. For the same reason, you want to try and start with an image that is relatively large – half a page at least – so you are starting with enough photographic detail to make the map look good.



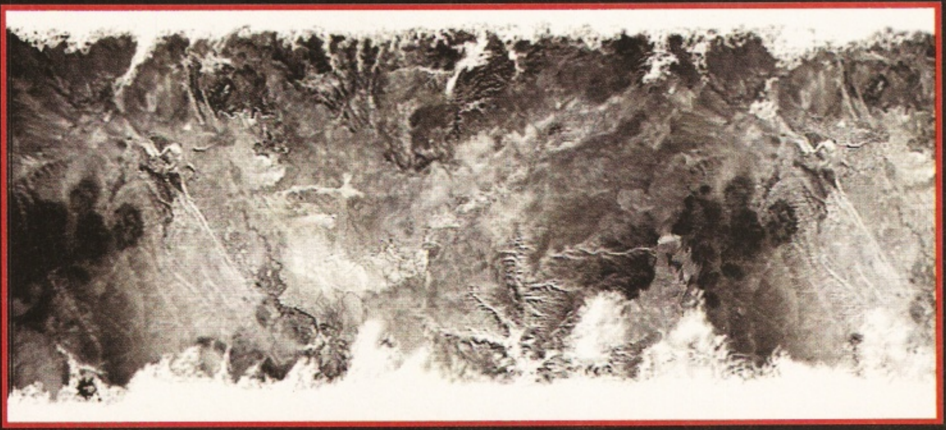
***Left:* The planet with a starring role In Babylon 5. The image map was captured in June 1992 with a video camera! This form of low-resolution picture can't withstand close scrutiny, so additional, close-up versions were recently scanned with a proper flatbed scanner (this is by far the best way to import image maps). If you must use a video camera, be sure that you have plenty of light, distributed evenly.**

Circles and spheres

Once you have finished your image map, you'll want to wrap it around your sphere as a cylindrical colour map down the Y axis. I know this may seem counter intuitive, especially with the spherical image map selection available, but this way works best – trust me! A spherical map will distort your image to a much greater degree, leaving you with an object that hardly resembles the image you so painstakingly scanned.

A cylindrical map wraps the image evenly from top to bottom, placing land masses and other details where you would expect them to be. However, the wrap *around* the sphere is twice the distance, therefore dictating the need for the rectangular map suggested earlier (the

Right: ***This is the actual image map cylindrically applied to Epsilon 3 (shown here in black and white to thwart piracy!). The polar regions at the top and bottom were added in a paint package to avoid mapping errors. If too much detail appears at the upper and lower edges of a cylindrical map, you may see 'scrunching' at the top and bottom of your sphere.***



Below: ***The same planet, but with Sharp Terminator turned off. Also, notice the use of fill light on the dark side of these planets. In reality, the dark half of a planet would be completely black, because the only sources of light (apart from the Sun) would be other planets and astronomical phenomena (such as nebulae). However, we eventually decided that filled planets simply looked better and, oddly enough, made the objects appear more realistic!***



"The secret to a good **planet** is all in the texture mapping."

length should be about twice the height). If this is not possible (i.e. the image you scanned is square and cannot be cropped), you can type in a width tile of two in the texture requester; this solves image stretching problems by extending your map half-way across the sphere, and then duplicating it around the other half. Keep in mind that this means your planet will only be viewable from one angle, since if the wrong part of the planet is facing the camera, you will see where the image repeats.

It should also be noted that, even with an adequate rectangular map, there will still be a seam on the backside of the planet, where the two sides of the map meet. Since this would only become apparent in a scene where the sphere rotates a full 360 degrees, in most cases this will not be a problem. If it is, you will need to make sure your image map is a seamless one by insuring that the left and right edges of your map match.

More boring planet stuff

While attaching a proper image map to your sphere is the heart of a good-looking planet, there are many other adjustments you can make to add that extra touch of realism. The simplest, yet most important, is to click the Sharp Terminator option from the surfaces panel. No, this has nothing to do with rampaging cyborgs, but how light shadows across your planet's surface. Without this option, light would fall off very gradually as it made its way across the sphere. However, with a Sharp Terminator, light will fall off very quickly to create the hard boundary of shadow so recognisable in astronomical photos. In even simpler terms, click this button and be amazed!



Right: ***You know him, you love him: Epsilon 3! This time with the inverted halo effect. Assuming this picture has been printed large enough and on good paper, you may see additional sharpness in the planet itself, because it isn't obscured by atmospheric haze. This technique cuts your render time in half!***



Above: ***This was the home to a Narn colony in The Coming Of Shadows. The slightly more rocky appearance is due, in part, to a slight specularity (shininess). A dark, low-contrast, black and white version of the colour map was applied to the specularity channel to achieve this. Also, notice how a bump map has given 'raised' detail to many areas (especially on the line of shadow).***

"The icing on the planetary cake is to create a soft, atmospheric halo."

If you don't mind adding a lot of rendering time, try adding a bump map to your planet. Use the same image as in the colour channel with identical settings as a bump map. Start with a low amplitude (around 50 per cent), and see how it looks. When applied properly, a bump map gives the appearance of raised portions on your sphere, adding depth to the overall look (mountains appear raised and land masses are more crinkly). If your original image doesn't contain enough contrast, don't bother to keep raising your amplitude – it won't help. LightWave creates the high and low ranges of the bumps based on light and dark areas in the image map – if yours doesn't have enough contrast, the bump map just can't function well. Fortunately, the fix for this is easy. Simply load up your original image into a paint program (or image processor), reduce it to black and white and increase the contrast. Save it out under another name and apply this as your cylindrical bump map; I guarantee it will work wonders. The only downside is that the extra image map eats away a bit more memory (although the 8-bit black and white image takes far less than 24-bit colour).

Piece of cake

Lastly, the icing on the planetary cake, is to create a soft, atmospheric halo around your new home world. This is done by adding a larger sphere around the existing one. Just copy your planet to another layer in Modeller, size it up a bit, give it a new surface name and copy it back to the same layer as the planet (they can become a single object as long as you are certain to apply separate surface names to each sphere).

Give your atmosphere surface a suitable colour (light blue, for instance) and start out by making it approximately 75 per cent transparent (remember, it is a *light* atmosphere). The halo effect is achieved by softening the edges of the new outer sphere, a task accomplished with the transparent edges toggle. Click this and render it with the default setting of 1. If the edges of the atmosphere do not show up at all, they may be too transparent, so lower the number to .5 and try again. Keep experimenting with these settings until you end up with a haze that suits your tastes (and don't forget to give the atmosphere a sharp terminator!).

You will also notice that, depending on its level of transparency, the atmosphere is altering the look of your planet. This is to be expected, since the new sphere is rendering over the other and will inevitably effect what renders underneath. It will probably soften your planet map and slightly deaden the colour, which often produces more pleasing results. If this doesn't appeal to you, once your atmosphere is adjusted, load your planet image into that oh-so-handy paint package and increase the contrast a bit – this should return your planet to its original clarity, even through the atmosphere. Another solution might be to add fractal noise to the transparency channel of the atmosphere (with the noise being at a level of 90 or 95 per cent). This makes for a patchy atmosphere (the right size and contrast can look like clouds) and lessens the impact of it on your original planet.



Atmospheric pressure

If you decide that you hate the way the atmosphere is interfering with your planet, yet still like the halo effect, rest easy, dear animator, for this too can be achieved! Go back to Modeller and flip the polygons of the atmosphere, so that they all face inward. Reload it into LightWave and try rendering it again (make sure that double sided is not selected under the new sphere's surface). If all goes well, you should see an atmospheric halo without any interference with your original planet. Magic, you think? No – simply the science of 3D.

This works since the only polygons now facing the camera are the ones on the inside of the sphere. If the sphere had no transparency, even these would not be seen and the sphere wouldn't render at all (as would be the case with any solid object that had its polygons facing inward). However, once transparency has been added, the inside polygons become visible and the ones facing us will render. Since most of the larger sphere is blocked by the planet, only the outer edges become visible. Understand? Good! If not, don't worry – just be happy that it works. Another plus to this method is that only the outer edges of the atmosphere render – saving you the considerable time it takes to render an entire transparent sphere over your planet.

Using this latter method has the drawback of looking like what it is – two separate objects. The result can be unconvincing, because the planet ends in a hard edge followed by a soft glow. To better blend the two, try giving a *very* slight edge transparency to your planet object. This creates a soft transition between the two spheres that may provide more pleasing results. As always, experimentation will help you decide what is best for you.

Sky full of clouds

We don't get many cloudy days in California, so we're often forced to create our own in LightWave. If you thought it was an impossible task to create big, billowing, balls of white fluff without millions of polygons – you were right! However, you can do the next best thing and

give the impression of these cute little beach partners by using only one polygon in conjunction with the friendliest of textures, fractal noise.

You must start out by creating a single, flat polygon to be your sky (and you thought modelling a planet was easy!). Make sure it's big, because it will need to fill the camera's field of view from layout. Give it an appropriate surface name (clouds or marvin will do) and save it out as your sky object.

Once it's set up in layout, create your background sky colours (found in the effects menu). You can leave it at LightWave's default of pure blue, or create some variation (shades of red or orange might look nice for a sunset). Once you have all this to your liking, it's time to add some precipitation.

Value of noise

Colour the sky polygon a basic white (the default of 200 may be good enough) and add fractal noise to the transparency channel (give the noise a value of 100 per cent). Depending on the size of your polygon, you may need to experiment with the texture size until the cloud size is to your liking. A rough guide would be to make the noise size a tenth the polygon size (a 100-metre sky should have a texture size of 10). A contrast of 1 should suffice for now, but bump up the levels of noise from 3 to 5 (this will give the clouds more definition). Make the diffusion value zero and raise the luminosity all the way to 100 per cent (so the sky won't be affected by your scene's lighting). Render this and see how it looks.



The size of the clouds may be right, but I'm sure you may think there are too many of them – the pattern is very regular and looks fake. If only you could add a *second* layer of transparent fractal noise, you might have something! Alas, LightWave only supports one. However, by using LightWave's Additive button (next to the luminosity channel), you can fake it.

Additive, luminous objects are seen only by what they add to the background. A 100 per cent additive object brightens what is behind it by 100 per cent, thus making that area more visible in the shape of the luminous object. If it is 0 per cent luminous, it adds nothing, and therefore becomes invisible (if you don't understand this concept, don't worry – it works).

If you make the sky object 100 per cent luminous (which you have) and click on Additive, its appearance won't change. However, if you add fractal noise to the luminosity channel, and give it a value of zero, the areas of noise will add nothing to the background and vanish! In effect, the spots of noise become transparent. Try this out, but give this noise channel a slightly larger texture size, and type in a few random numbers for the texture centre (different values are important, otherwise your luminosity and transparency fractals will occupy the same space). For some variation, stretch out the noise on either the X or Z axis by 50 per cent or more – it helps break up the regularity of the patterns. You might also try giving this channel a different contrast value.

If you've done everything right, the result should start looking very good. Experimenting with different texture sizes and contrasts will yield the most striking variations. Adding a velocity on either the X or Z axis, and a very slight one on the Y, will produce an animation that looks very much like time-lapse cloud photography! And all with one, simple polygon. Too good to be true? Not at all! This technique was used to create clouds for the Babylon 5 episode, Voice In The Wilderness, as well as the upcoming third season show, Messages From Earth.

No big deal

As this part of the Universe-o-matic series should demonstrate, it doesn't take a lot of high-tech skills to come up with some very keen images. Nothing described here takes souped-up machinery nor years of practice to master – just a basic understanding of LightWave and a little imagination. ■



Above: ***The same planet with no bump map. While it certainly looks better, the bump-mapped version took much longer to render. Want to know a secret? In many cases, you can render a planet against a black background, save the image, and then map it on to a polygon to use in its place! It looks no different and saves heaps of render time. Just be careful to match the lighting on objects and avoid complex camera motions (the perspective changes may reveal the 2D nature of your planet polygon).***

"It doesn't take a lot of **high-tech** skills to come up with some very keen images."



White, fluffy cloud created in LightWave. They are a rarity in California, apparently.

Extending E-mail

Part 2

Darren Irvine *looks at customising MIME for any Amiga file type.*

Last month we looked at the basics of MIME and how to get MetaTool up and running on your Amiga. You should now be able to send files such as GIFs, JPEGs and 8SVX samples along with the text of your E-mail messages. However, there is no reason at all why you should stop there, and if you regularly send E-mail to another Amiga user who uses similar applications to yourself, setting up a MIME type for each of the shared applications can save a lot of conversion time.

For the purposes of this tutorial I will be setting up MIME to handle files generated by the word processor Final Writer, but the principle remains identical for any type of Amiga application, from OctaMED to AdPro.

Configuration files

Although the MIME specification itself and MetaTool in particular are designed to avoid a lot of tedious editing and technical stuff, to set up a new MIME type you will have to steel yourself and dust off that old text editor a couple more times. Providing you have installed MetaTool in a standard way, both the files that require an additional configuration line reside in the MetaTool top level directory, and deal respectively with sending new MIME messages, and with interpreting incoming ones.

The first file is called 'mime.types' and is basically a look-up table allowing MetaTool to decide which type of file is being dragged into its compose window, based on the file extension. I'm in the habit of saving my Final Writer documents with the extension '.wri' and so the line which I need to add to mime.types is:

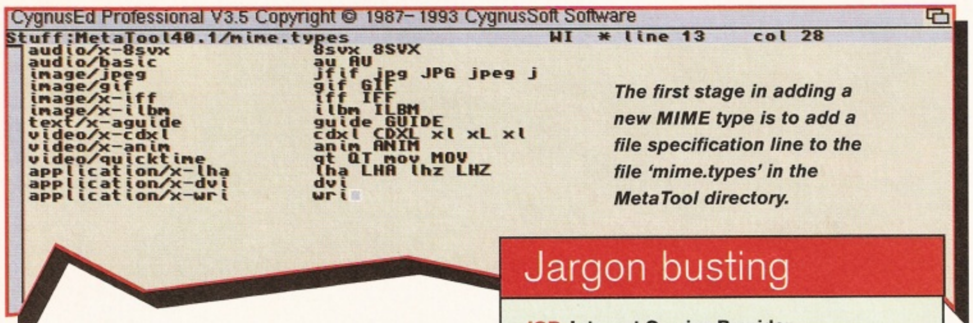
```
application/x-wri    wri
```

This tells MetaTool that files dragged into the compose window with the extension `.wri` are associated with an application, and that the application is external to the basic MIME specification. You can add any number of new lines in this way, to cover each of the applications that you want to add, providing that the file extension has not already been used for another MIME type.

Note that if you were adding MIME support for, say, a new graphics file type the line would look similar to:

```
image/x-jjj
```

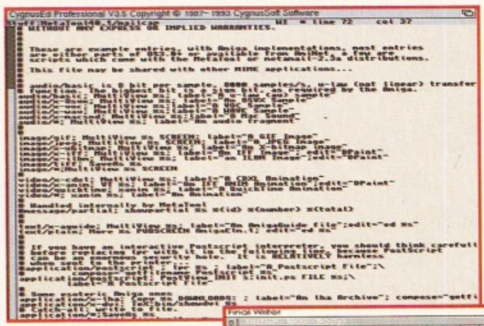
`jjj` in this case adding support for a mythical image filetype with extension '`jjj`'. The second file which requires an additional configuration line for the new MIME type is the file 'mailcap'. Again this file is basically a look-up table, this time instructing MetaTool on how to handle each type of incoming MIME partial. The line added to handle the new Final Writer type looks similar to the one added to mime.types and is:



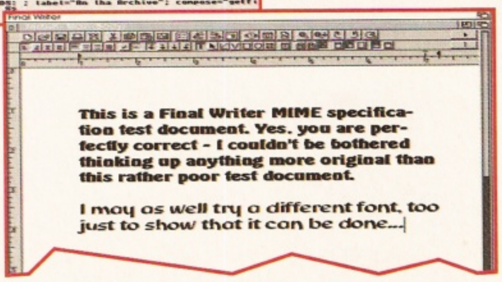
The first stage in adding a new MIME type is to add a file specification line to the file 'mime.types' in the MetaTool directory.

Jargon busting

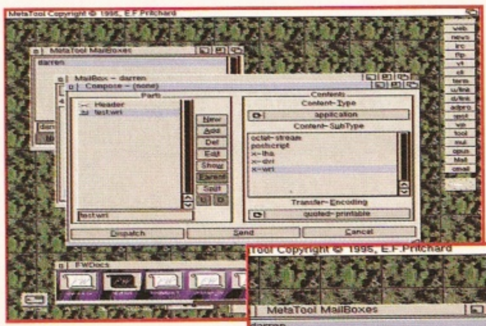
ISP: Internet Service Provider. The company through which you are connected to the Internet.
HEADER: The information at the start of a mail message relating to the sender, recipient and subject matter – the "From:", "To:", and "Subject:" fields. Also the line of a MIME message describing the contents of a given part.
BODY: The part of a message after the header. In MIME the body refers to the actual data in a given part, after its own header.
PARTIAL: A piece of a MIME message containing a particular data type.



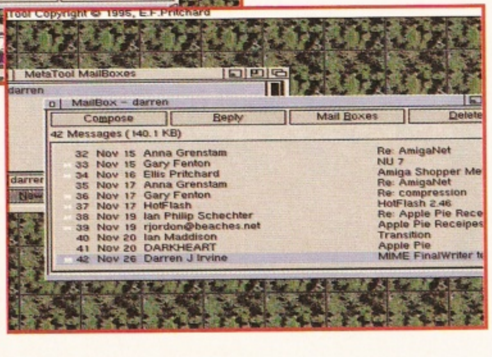
Next, add a corresponding line to the MIME decoding file mailcap.



Make sure that you save the document that you want to send via MIME with the file extension that you have set up in mime.types and mailcap.



Use MetaTool to send a new E-mail message and drag the newly-created file into the compose window.



Reloading MetaTool to see the newly sent test message.

```
application/x-wri; finalwriter %s ;
```

The `%s` in this line is used internally by MetaTool to represent the temporary filename given to the partial when you double click to display it. Note that this assumes that you have set up a path to the directory in which the Final Writer executable resides. If this is not the case, it is perfectly acceptable to include a full path in the mailcap configuration line.

Testing the new MIME type

When you've added a new configuration line to each of the required files, the next step is to obviously try and both send and receive a MIME message using the new type. Create a test file of the required type, ensuring that you have given it the correct file extension – this isn't absolutely necessary, but it is what allows MetaTool to automatically identify the MIME type required. Although this can be done manually, it detracts somewhat from the original MIME concept of ease of use.

Open up the MetaTool message compose window, and edit the header specification to send a message to your own E-mail address. Now drag the newly-created test file into the compose window. If all goes well, MetaTool will correctly identify the file as belonging to an external application, and should choose the application type that matches the extension, according to the line added to mime.types. If not, check mime.types for possible filename misspelling or duplication. Next, send the test message to yourself. With my particular configuration of AmiTCP, I can accomplish this by typing 'mailkick' at the Shell prompt – you may have to go the whole hog and connect to your ISP and go through the procedure of sending and downloading E-mail to send a local mail message. If sending mail locally to your own address doesn't work try sending to:

```
your_username@127.0.0.1
```

`127.0.0.1` is the standard 'loopback' IP number, always referring to the machine on which the command is being executed, and you may be able to use it to send mail locally without connecting to your ISP.

When you manage to get the local E-mail message transferred, reload MetaTool and check to see that the test message has shown up in your mailbox. When you double click on this new test message, MetaTool will display the list of partials included in the message. In this case there are only two – the message header and the Final Writer document. At this stage MetaTool is displaying the partial types according to how they were originally sent.

Double clicking on the message body partial causes MetaTool to use the mailcap file to check to see what it should do with message partials of this particular type. If you've correctly added the line to mailcap the partial will be correctly identified as being associated with Final Writer, and so MetaTool runs this application automatically loading the original message.

Final Writer pops up a screen configuration window as it runs, but many applications will appear even more seamless, automatically loading with the newly arrived MIME document.

You can see from this example that adding a new MIME type is straightforward – providing you add a matching line to both mime.types and mailcap for each filetype that you wish to use, then transferring Amiga specific files using MIME is a simple process.

Of course, the person to whom you are sending the MIME messages must have their mime.types and mailcap set up to handle the same file extensions in the same way as you.

Extending even further

The Amiga is unique in its configurability in terms of MIME and setting up other extensions to E-mail such as file serving (see boxout above). Although it requires a bit of thought to get things up and running, it's worth it in the end to have such a flexible system. ■

Are you being served (again)?

A few months ago I covered the topic of setting up your Amiga as an FTP server, allowing other Internet users to retrieve files from your machine. Security considerations aside, the big disadvantage with this was that you have to be online all the time that you want other people to have access to your files.

One alternative to FTP which doesn't really increase your online time much is to set up a mail server on your machine. There is really only one such system available for the Amiga, and (rather conveniently) it's called MailServer and is available as always from any of the Aminet mirror FTP sites.

MailServer is an easy to set up ARexx script that uses the AmiTCP configuration file 'aliases' (usually found in your UULIB: directory) to insert a hook into your normal E-mail system, intercepting messages sent to a particular user name.

To get it up and running, you will have to decide on a user name other that your normal one that will operate as the mailserver address – note that although some ISP's will send through E-mail to any user at your domain name, some specifically only route messages for your exact E-mail address. If the latter is the case then you will have to ask them nicely for a second user name at your existing domain name.

My system can accept E-mail for either 'darren' or 'darsy' and I'm using the latter for the mailserver. Apart from a few assignments, the only configuration that is required is to insert a line similar to the following into your aliases file:

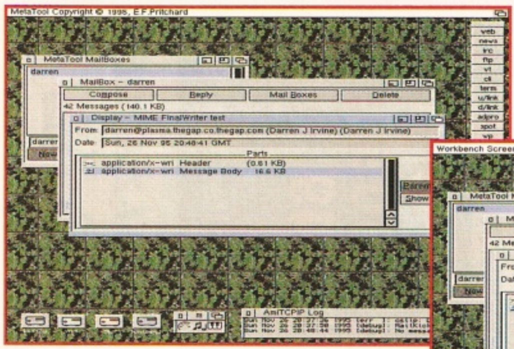
```
mailservername:
"|mailserver:sys/mailserver"
```

You should replace mailservername with whatever user name you are using for mail serving, for example:

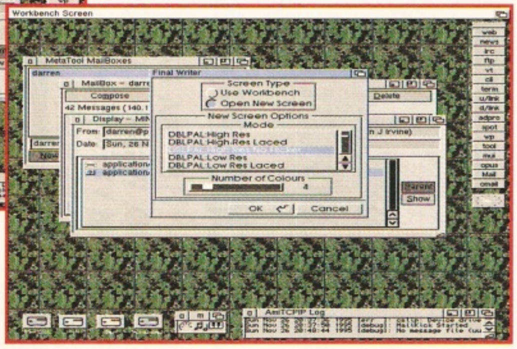
```
mailservername@your.address
```

There is a directory called 'public' underneath the mailserver one, and you should put any files that you want to make available in it. Mailserver operates by intercepting any E-mail messages sent to mailservername and executing them – either returning a help message or actually sending back a requested file.

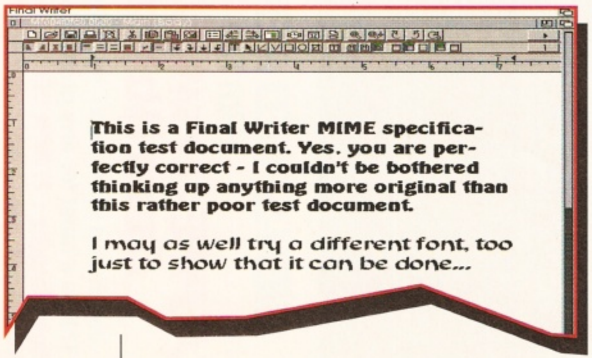
It's also worth getting hold of (from Aminet) the uuencoding program UUxT, which Mailserver can use to automatically encode outgoing files. Alternatively, you can pre-encode any binary files that you place in the 'public' directory.



Note that MetaTool has correctly identified the incoming message as the correct MIME type.



Double clicking on the message body brings up the familiar Final Writer Start window.



Finally, the original message is redisplayed. Note that MetaTool has given the file a rather odd filename.

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Lasting impression

Returning for part six in this tutorial series is **Larry Hickmott** *and some tips about printing. And you could win the DTP program of your choice!*

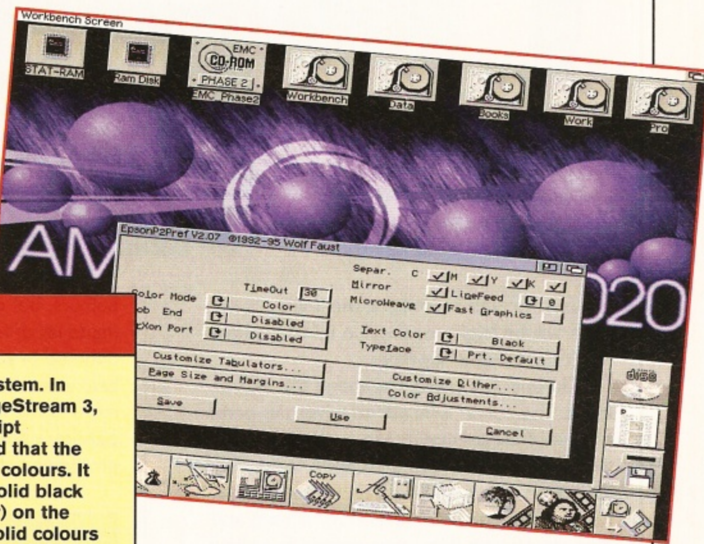
In DTP, no exercise causes as much heartache as printing. It doesn't have to be that difficult providing you understand the printing processes and the limitations and possibilities of each. To help you comprehend the ins and outs of it all, I'm going to discuss how we go about printing here at LH Publishing.

Since as far back as I can remember our main aim has always been to get a quality from our desktop printers that matches that from a printing press. In other words, professional quality results.

Like most of you, we produce a large variety of documents, from letters to books. The printing method we use for each varies depending on what we are trying to achieve. The most basic document we do is a letter. The program we use for this and nearly all of our work is ProPage, although we have used a variety of programs – we needed more than one program because of different print speeds.

First, we needed a letterhead complete with a logo and an interesting nameplate. We used ProPage for this, but because it took so long to print – like most graphics-based programs do – we had to find a way of adding text to the letterhead, but at the same time reduce the time it took to print.

So we designed a blank letterhead in ProPage and then printed a load of them to use later on. This was achieved by printing the file to disk using the utility CMD. Then by using a text-based script that told the Amiga to copy this file to the parallel port, we were able to leave the printer working overnight while a large number of copies were run off.



When we needed to produce our own film for our letterheads to be printed on a printing press, we used Studio 2 which has a mirror function.

Jargon busting

Pantone: A colour matching system. In programs like ProPage and PageStream 3, which are Pantone and PostScript compatible, colours can be used that the software will see as being spot colours. It will therefore print these as a solid black (using a black and white printer) on the page. It cannot print these as solid colours on a colour desktop printer because Pantone colours are special inks mixed to create a specific Pantone colour that is catalogued in special swatches and books.

Desktop printers are only capable of producing 'process like' colours which are colours created from four process inks.

When text was required for these letterheads we used Protext. We chose Protext because it can output text much quicker than any other program, thanks to its custom printer drivers. When you are printing 20 or more letters a day, the last thing you need is to have to wait half an hour for each of them to print.

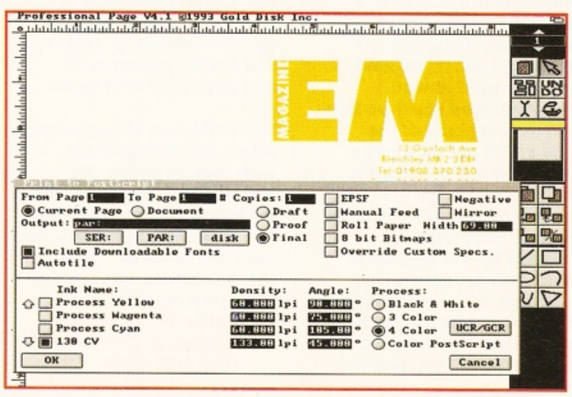
Nowadays, thanks to the addition of PostScript lasers, we can use ProPage for the whole process but not everyone can do that, so a way around the problem is do what we did before we got our PostScript lasers. That is, get your local printing firm to print the letterheads for you. The text can then be added using a program like Protext which was given away on two Amiga Shopper Coverdisks (AS53 and AS54).

Hold the press!

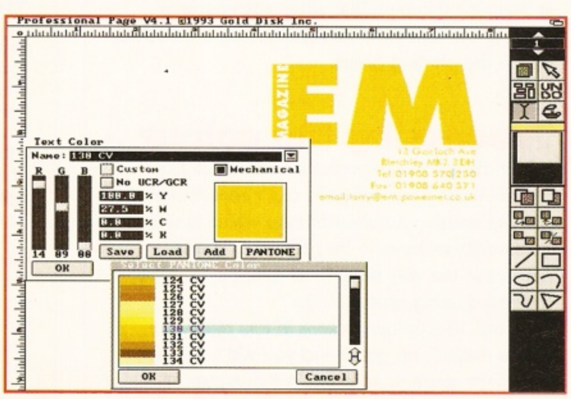
Having our letterheads printed on a printing press opened up some new opportunities for us such as being able to use a spot colour for the nameplate. We decided that a gold Pantone colour would look striking and so I went back to the sweatshop and created the letterhead. The page I created was made up of a logo and some text printed in black. The reason for this will become clear in a moment or two.

Once the page was finished, I printed it to my DeskJet, making sure I had Mirror selected in the Studio 2 software I was using. The film was then taken to the printers and a printing plate was made.

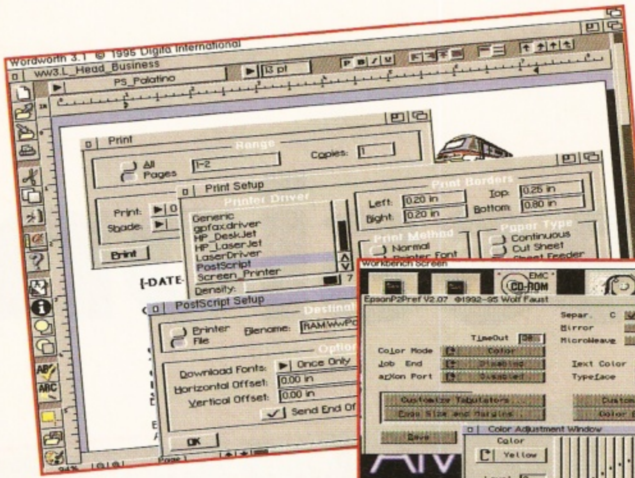
The mirror image is required because the printed image has to be placed hard up against the plate, which means that after the plate is



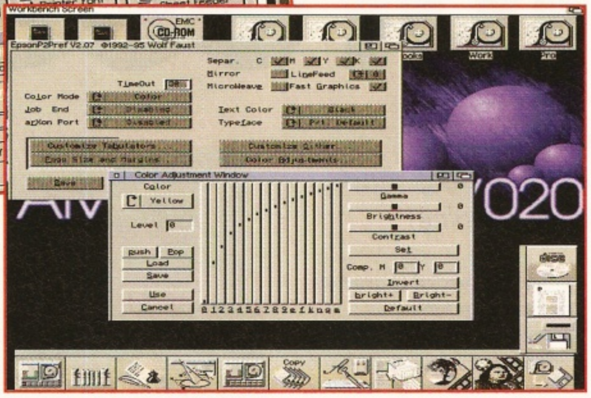
***Left:** DTP programs give you greater control over colour separations than word publishers.*



***Right:** When you want to create a colour letterhead to be printed on a printing press, you should use spot colours like Pantones, as seen here in ProPage 4.1.*



Left: ***Most programs are PostScript compatible. This enables you to print to any PostScript compatible device without actually having to have a printer driver for that printer.***



Right: ***Amiga owners have never had it so good. Programs like Wordworth let you create professional-looking documents and then output them to hi-tech printers like the Epson Stylus.***

exposed to ultra violet light, the image of the page will be "right reading". In other words, it won't be mirrored anymore.

Up until this point, the image still looked black. The colour was added when the person in charge of the printing press added the ink, which in this case was a Pantone Gold. When the image was transferred on to paper, what had been a black piece of text on my screen and then my artwork (film), was printed in a shiny, metallic-looking gold ink.

Anyone who is able to create custom inks can experiment with this by replacing the black ink in a cartridge and putting a coloured one in its place. Then print a page full of black text and the effect is the same as the one I have just described but without all the other steps such as making film and so on.

Spot the colour

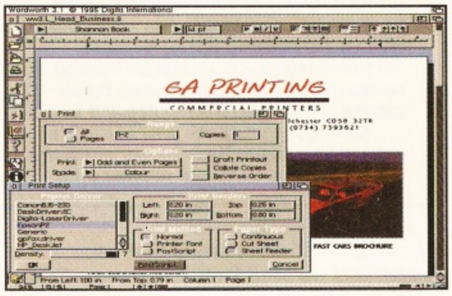
And yet the page doesn't have to be created in black on screen provided you have a PostScript printer. If your program supports spot or mechanical colours (Pantones for example), you can choose to have the colour gold displayed on screen. This is useful when you are working with more than one spot colour or you just want to know what your page looks like in a colour.

However, when you print it, because your software can see it as a spot colour, it will print it as a solid black (black and white printer). This is because it knows that when the image is printed, the black will be replaced by a coloured ink on the printing press.

Processing the colour

Which brings me to process colours. Unlike spot colours, your software can't separate all the colours used in a colour bitmap which is why these colours have to be printed as process colours in the way described. (Amiga Shopper is printed using process inks.)

Look at a colour picture in this magazine with a magnifying glass and you will see that the image appears to contain thousands of colours, but on closer inspection it is actually made up of four process colours which are dithered in what are called rosettes. These help simulate other colours by mixing one or more of the four process colours together in a pattern – like the way a colour desktop printer produces colour images.



For the best quality output (colour or black and white), you need a printing enhancement package like Studio 2 which gives you control over the dithers used and the output colour.

When printing a colour image to a non-PostScript colour printer, much of the hard work of making the separations is done by the software and your printer driver. However, if you were creating a letterhead with the same colour image and it was to be printed on a printing press, the separations made by your software would have to be printed to disk (PostScript) and then each of those colours printed on to a different piece of film.

Each process separation would then be printed in black but this time (unlike spot colours), many of the colours will be dithered and it won't be until all four colours have been printed on top of each other that you can see the colour rosettes simulating the different shades and colours.

Learning the trade

Colour printing may seem fairly simple when you use a desktop colour printer, but as soon as you want to start making use of a printing press, it gets more complicated.

In programs like PageStream 3, you will come across terms like Knockout and Overprint. This is the difference between printing simple stuff on your desktop printer and going for high quality output. Not only do you have a lot of jargon to deal with, but when you start talking to bureaus, they will also expect you to know how the processes work.

My advice to anyone is to experiment and the knowledge will come with time. In the last few years we have gone from printing our letterheads on a DeskJet 500 to producing film for our printing firm on affordable desktop lasers. This enables us to produce good quality colour covers for our books and so on without it costing the earth.

A three-colour cover recently cost us less than £100 to produce because we knew what short-cuts could be taken – such as producing our own film. And we had a friendly printing firm too, of course.

Well that's the end of this current series. Twist the arm of the editor (not too hard now) and maybe she'll let me come back to start a practical look at design in publishing. ■

WIN! The publishing program of your choice

Yet again, we give you the opportunity of winning a piece of publishing software. As usual, there is a catch and this month your task is to create a poster.

Design a poster to knock our socks off and you could win the publishing program of your choice and have 15 minutes of fame by having your work printed within the hallowed pages of Amiga Shopper. The software you get to choose from is as follows:

Final Writer 4: Now one of the most popular packages on the Amiga, Final Writer 4 contains loads of powerful tools including Styles and the ability to have chapters within the one document. It also sports a grammar checker and has EPS and ARexx support.

PageStream 2: Hot off the presses at Soft-Logik is a re-release of one of the Amiga's most popular DTP packages ever. If you have only ever used a word processor, then you'll be able to marvel at some of the tools a DTP package gives you with this fine program.

Professional Page 4.1: Another re-release, this is the program used by Larry Hickmott for his magazine Em as well as many of his books, all done on the Amiga of course. ProPage has many outstanding features like user-friendly ARexx support, colour images on-screen, style and paragraph tags and much more.

Wordworth 5: The new kid on the block, Wordworth 5 is set to take the Amiga by storm with a load of new features including style tags and ARexx adding to its impressive array of tools.

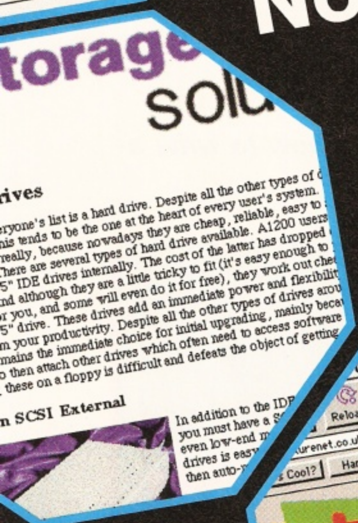
There are also 25 runner up prizes of a three-month subscription to Em, the independent Amiga DTP mag published by Larry Hickmott.

However, before you can get your hands on one of these products, you need to send your entry to:

Amiga Shopper DTP Compo, 30 Monmouth St, Bath BA1 2BW.

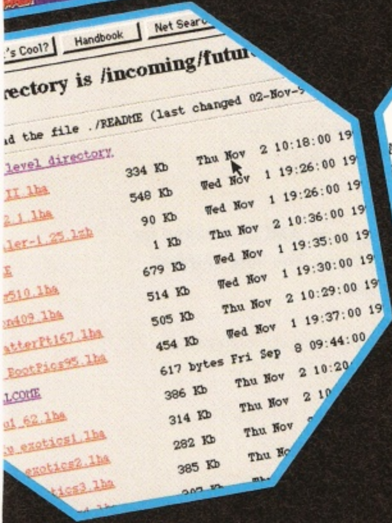



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AS Disker

Steve Bye *of F1 Licenceware is back with his AMOS tutorial. This month he explains how to write a complete utility. You'll find more AMOS code on our Coverdisks.*

Over the last three months we have looked at various unconventional ways of using AMOS, like storing programs inside your code and interacting with AmigaDOS. Now we're going to write a complete utility harnessing much of what we have already covered in this tutorial. The program is a small utility I have called AS Disker. It allows the user to perform various operations on floppy disks, very easily. It uses a simple but intuitive button bank and has two output screens.

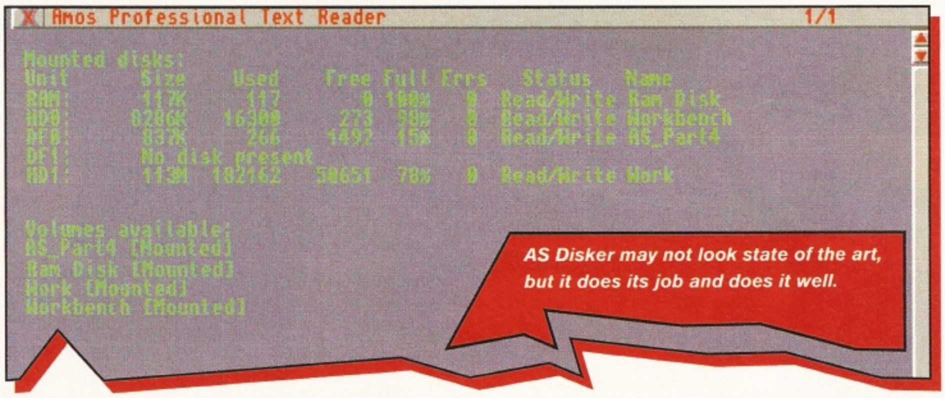
To save a lot of programming time, Disker uses AmigaDOS commands to perform its tasks, and to make sure the commands are always present they are stored inside the Disker program itself. Disker offers the user the following operations: Format, Quick Format, Install, Relabel, Check Boot, List and info.

First, we must set up a screen and set some nice screen colours, in the style of Workbench.

```
'Set up a hires screen of 4 colours,
and set up the palette
Screen Open 0,640,250,4,Hires
Flash Off : Curs Off : Cls 0
Colour 0,$777
Colour 1,$0
Colour 2,$FFF
```

Next, we need to make sure all the needed AmigaDOS commands are available. We could call them from "Sys:c/" but if they are not there it will cause problems. If our program supplies the commands we can't go wrong. Each program is stored in an AMOS data bank (see Amiga Shopper Christmas issue on how to do this). The commands are saved out to the RAM disk and as such are fast and easy to access.

```
'save out Ados prgs stored in banks
to ram
Bsave "ram:format",Start(10) To
Start(10)+Length(10)
Bsave "ram:install",Start(11) To
Start(11)+Length(11)
Bsave "ram:relabel",Start(12) To
Start(12)+Length(12)
Bsave "ram:list",Start(13) To
Start(13)+Length(13)
Bsave "ram:info",Start(14) To
Start(14)+Length(14)
```



AS Disker may not look state of the art, but it does its job and does it well.

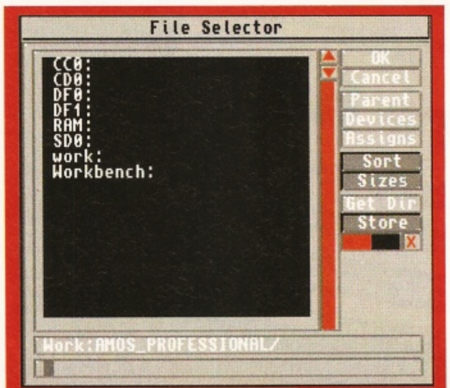
There are two variables that we need to look at inside as well as outside of procedures so we must make them global.

```
'Set a few variables
Global SOURCE$,MZ
SOURCE$="DF0:"
```

Disker's interface has nine buttons so we need to reserve nine zones for them (see AS January 1996 issue for more info on how the 3D button routine works and more info about zones).

```
'reserve zones for buttons
Reserve Zone 9

'draw buttons and set zones, all in
one loop
'by using some simple maths
```



Changing the requesters palette in AMOS Pro is easy when you know how!

```
Ink 1,0
For A=1 To 9
AC1=36+A*14
AC2=AC1+10
Set Zone A,100,AC1 To 200,AC2
BUTTON[100,AC1,200,AC2,1]
Next A
```

So far we have set up the screen, the screen colours, the button zones and rendered the buttons. We now need to print some text on the buttons so the user knows which does what.

```
'print text inside buttons
Text 104,58,"   FORMAT   "
Text 104,72,"QUICK FORMAT"
Text 104,86,"  INSTALL   "
Text 104,100," CHECK BOOT "
Text 104,114,"  RELABEL   "
Text 104,128,"  LIST DIR  "
Text 104,142," DISK INFO  "
Text 104,156,"SOURCE> DF0:"
Text 104,170,"    QUIT    "
Paper 0
```

I have decided to open an AMOS window for messages and user input. The little snippet below handles all that.

```
'Open a window for text output
Wind Open 1,210,42,30,17,1
Border 1,0,1
Title Top "AS Disker V1.0"
Title Bottom "Steve Bye"
Curs Off  Scroll On
```

Now we come to the heart of the program, the

main loop. This is where we check whether the mouse is over a button zone and if so, whether the left mouse has been clicked to select that button. If a button is clicked then it is animated and the appropriate procedure is called.

```
'The main Loop
Do

'Enable proper multitasking
Multi Wait

MZ=Mouse Zone

'Check zones and left mouse button
If MZ>0 and Mouse Key=1

    'calculate the butt coords
    according to mz & draw butt, in &
    then out
    AC1=36+MZ*14
    AC2=AC1+10
    BUTTON[100,AC1,200,AC2,0]
    Wait 10
    BUTTON[100,AC1,200,AC2,1]

    'Set curs position for output in
    window
    Locate 0,4
    'call relevant procedure
    On MZ Proc
FMAT,FMAT,INSTALL,CHECKBOOT,RELABEL,L
YST,DINFO,SOURCE,QUIT

End If
'Do it all again and again and
again...
Loop
```

Now we come to the set of procedures that do all the work.

```
'The procedures
Procedure FMAT 'This procedure
handles Format and Quick Format
'If button 2 (QFormat) was pressed
make X$=" Quick"
If MZ=2 Then X$=" QUICK " Else X$=""
'Set up command line
S$="Ram:format drive "+SOURCE$+" name
"+"EMPTY"+X$+"
NOICONS"+Chr$(0)
Print "Format disk in ";SOURCE$
'Give user a chance to abort
Line Input "Please Confirm y/n ";C$
C$=Upper$(C$)
If C$<>"Y" Then Clw : Curs Off : Pop
```

Beginner's spot: introduction to Spack

Spack is a very powerful and useful command to know about. It allows you to pack an IFF picture down to a fraction of its original size. You can then save the compressed picture as an Abk file to disk, or better still store the picture in a memory bank and save it along with your program.

Because the picture is stored inside your code, no "Load" commands or disk access is needed when your program is running. The obvious advantages are savings on disk space, disk access time and no external files to worry about.

Let's take a step by step tour of Spacking a picture and storing it. Imagine you have just loaded up AMOS and you are sitting in front of the blank editor. Press the Escape key to enter direct mode, now type in:

```
LoadIff "Df0:Picture.iff",0
```

And then press Return to execute the line. The above line presumes you have a disk in Df0: with a picture on it called "Picture.Iff", which you almost certainly haven't, so just change the `Df0:` and/or `Picture.Iff` parts as required. If all went well you should now be staring at the loaded picture in direct mode. The reason you can see the picture is that you loaded it on to the default screen, which is screen 0.

Staying in Direct mode type:

```
Spack 0 to 10
```

And nothing much will seem to happen, but it actually has. You have just packed screen 0 into memory bank number 10. Easy, wasn't it? Now type:

```
Cls 0
```

To clear the screen. To check your picture really is stored in bank 10, try this:

```
Unpack 10 to 0
```

Your picture will be unpacked from bank 10 and displayed on screen 0. Now press Escape to return to your AMOS editor and type in the following:

```
Unpack 10 To 0 Clear Key: Wait Key Edit
```

The above short program displays your packed picture until a key is pressed, you will then be returned back to the AMOS editor. Now save your program. When you re-load the program you will find that bank 10 still holds your picture.

Note: When you UNPACK a picture it does not erase the bank so you can keep UNPACKING as many copies of the picture as you need. If you do need or want to delete the picture from the bank just use ERASE bank number. For example, ERASE 10, and the memory previously used by that bank should be returned for use to your program. Use "ListBank" to check what banks are being used in your program.

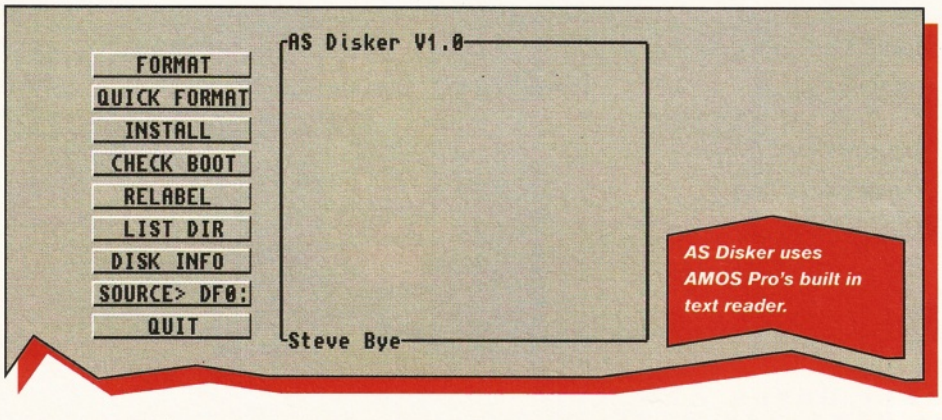
Note:
AMOS automatically uses the palette of any picture you unpack!

```
Proc 'Inform that formatting in
progress
If MZ=1 Then Print "Formatting
disk." : Print "Please wait..."
If MZ=2 Then Print "Quick Formatting
disk." : Print "Please wait..."
'Execute the Amigados Format
command, held in S$
Exec S$
Wait 10
Clw : Curs Off
End Proc

Procedure INSTALL
'This procedure installs a bootblock
to the disk select by source button
Print "Installing disk" : Print
"please wait..."
Exec "ram:install "+SOURCE$
Wait 40
Clw
End Proc
```

```
Procedure CHECKBOOT
'This informs the user of the type
of bootblock installed on source
disk
'This command line executes the
install command and redirects the
output
'of the command to the Ram disk as
an ASCII text file.
Exec "ram:install check "+SOURCE$+"
>Ram:txt"
'This line uses Amos Pro's built in
text reader to display the output
Read Text "ram:txt"
Clw
'Now delete the txt file from ram:
Kill "ram:txt"
End Proc


Procedure RELABEL
'This proc allows the user to give
the source disk a new name
'Ask for the new name
Line Input "New name:";N$
If N$="" Then Pop Proc
'Make sure max of 30 chars, if more
cut string to 30 chars
If Len(N$)>30 Then N$=Left$(N$,30)
Exec "ram:relabel "+SOURCE$+" "+N$
Wait 100
Print "Disk relabelled to " : Print
N$ Wait 100
Curs Off
Clw
End Proc
```



AS Disker uses AMOS Pro's built in text reader.

```
Procedure LYST
'This proc displays a full info listing of the contents
of the source disk
Print "Please wait..."
'Use redirection again
Exec "ram:list all "+SOURCE$+" >ram:txt"
Read Text "ram:txt"
Clw
Kill "ram:txt"
End Proc

Procedure DINFO
'This gives user info on all current devices
'See other procs on redirection etc.
Exec "ram:info >ram:txt"
Read Text "ram:txt"
Kill "ram:txt"
End Proc

Procedure SOURCE
'This simply swaps DF0: for DF1: (if available) and vice-
versa
If SOURCE$="DF0:" and Exist("DF1:")
SOURCE$="DF1:"
Text 104,156,"SOURCE> DF1:"
Else
SOURCE$="DF0:"
Text 104,156,"SOURCE> DF0:"
End If
End Proc

Procedure QUIT
'Bet you can't guess
Stop
End Proc
```

And last but not least, that great little button procedure.

```
'This proc draws the buttons
Procedure BUTTON[X,Y,X2,Y2,STATE]
'State 1=Button out
'State 0=Button in
'decide on ink colours to use
If STATE=1
   C1=2 : C2=1
Else C1=1 : C2=2
End If
'Draw button
Ink C1
Draw X,Y To X2-1,Y : Draw X,Y To X,Y2
Ink C2 : Draw X+1,Y2 To X2,Y2 : Draw X2,Y To X2,Y2
Ink 1,0
End Proc
```

Disker would need a lot more options to be called a decent utility, but I will leave that up to you. An obvious option would be "copy disk", or how about check virus, delete a file, read a text file, display a picture or play a mod.

New-look file requester

Here's a great tip from my AMOSZine pal, Andy Smith. To change the AMOS Pro file requesters colours you should do the following. Use a copy of AMOS Pro before continuing.

- Load the file 'Default_Resource.IFF' from the 'System_Iffs' drawer which is contained in the 'Accessories' drawer – into Deluxe Paint, or similar.
- Change the colours to that of your choice using the palette requester.
- Save the file and quit DPaint.
- Load AMOS Pro and go into the Resource Editor.

below Click 'Load a bank' and choose 'Default_Resource.Abk' from the APSystem folder.

- Save the bank and quit the Resource Editor.
- If you now reload AMOS Pro you will notice that the file requester uses the new colour scheme. ■

Mail Order

Call our **Order Hotline** on **01225 822511**

Turbotech Clock Cartridge



Your Amiga will always know what day it is with this handy device – even after it has been switched off! Once the supplied software is installed, boot-up and the time and date are already set. Fits into the disk drive port (or on the back of your second drive).

Description	Turbotech Clock Cartridge
RRP	£19.99
AS price	£17.99
Order code	ASCLO
Special subscribers price	£16.99

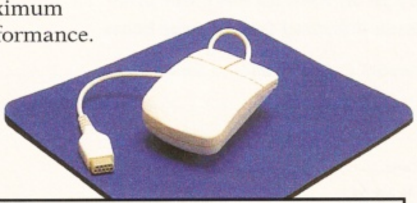
Magnum RAM 8

Make your Amiga more than twice as fast with a Magnum RAM 8 accelerator card. Free with every Magnum order comes a copy of Opus 4.12, worth £50.

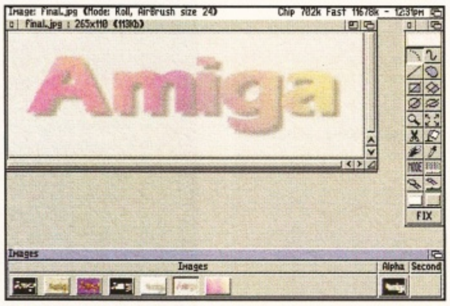
Description	Magnum RAM 8 0Mb
AS price	£55.99
Order code	AFS/MR
Special subscribers price	£54.99
Description	Magnum RAM 8 2Mb
AS price	£115.00
Order code	AFS/MR
Special subscribers price	£110.00
Description	Magnum RAM 8 4Mb
AS price	£169.00
Order code	AFS/MR
Special subscribers price	£164.00

Mouse 'n' Mat

At last! A quality replacement mouse at a bargain price, complete with mouse mat. The 260dpi resolution mouse is 100 per cent Amiga- (and Atari ST-) compatible and both buttons are fully micro-switched for maximum performance.



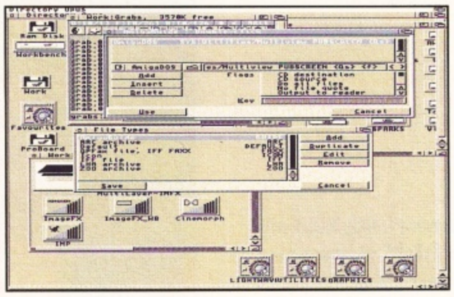
Description	Mouse 'n' Mat
AS price	£12.99
Order code	ASMM
Special subscribers price	£11.99



Photogenics

There can't be a single Amiga owner who isn't aware of this powerful package and the incredible impact that it has had on the Amiga scene. The most talked about image manipulation package ever also gives you the creative freedom of a traditional paint program. Check out our Photogenics tutorials (AS48 to AS54) and find out what this great program can do (for back issues, call ☎ 01225 822511). And you could, of course, get hold of Amiga Format issue 69 and try out the demo on the Coverdisk.

Description	Photogenics
AS price	£54.95
Order code	ASH502
Special subscribers price	£49.95



Directory Opus 5

save £10

The latest incarnation of this powerful and well-designed file manager received 92 per cent and an AS Star buy award in issue 51 (for back issues, call ☎ 01225 822511). Directory Opus 4 was brilliant and version 5 is no exception. Now this program can be yours for £10 less than the RRP of £59.99.

Description	Directory Opus 5
AS price	£49.95
Order code	ASOPU
Special subscribers price	£45.95

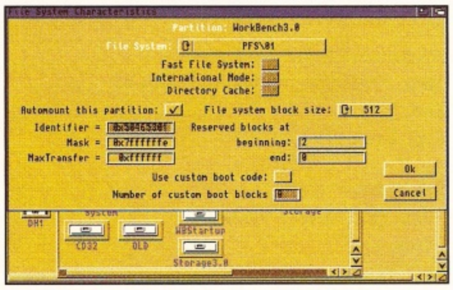


save £100

Music-X 2

Music-X 2 is a full MIDI sequencing package for controlling synthesizers, drum machines and any other MIDI equipment, or you can use it with internal Amiga samples.

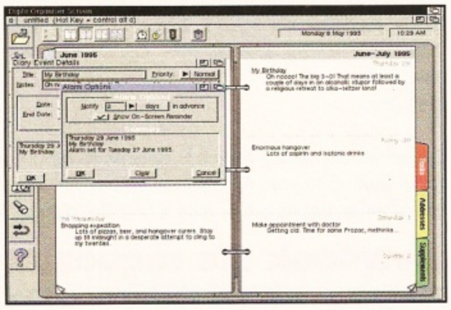
Description	Music-X 2
RRP	£149.99
AS price	£49.99
Order code	ASMX2
Special subscribers price	£46.99



Ami-FileSafe

The new standard filing system for the Amiga. Not only does Ami-FileSafe achieve greater speed and efficiency than FFS, it also brings the extra security of a filing system that can survive Guru meditations and crashes without causing disk block errors.

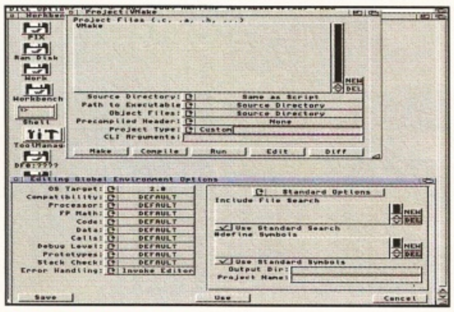
Description	Ami-FileSafe
AS price	£69.75
Order code	ASAFS
Special subscribers price	£65.75



Digita Organiser

An Amiga Shopper Star buy, after using this program you'll wonder how you ever kept your appointments in order. Easy to use, but full of features, this is truly the king of electronic filofaxes.

Description	Digita Organiser
AS price	£34.99
Order code	ASDO
Special subscribers price	£31.99

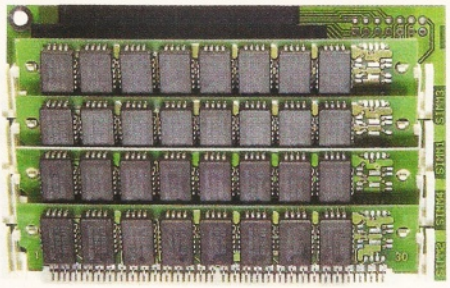


DICE 3.01

Save over £30 when you buy the complete version of our DICE Coverdisk from issue 47. The full package comes on five disks, with a 450-page manual, and new features, including: no limit on the number of procedures in each file; a revision control system; link libraries for 1.3, 2 and 3; extra link libraries; higher maths functions such as FPU; support for bitfields, pragmas, etc.

save £30

Description	Dice 3.01
RRP	£129.99
AS price	£98.95
Order code	AS501
Special subscribers price	£94.95



A500 Plus and A600 1Mb RAM upgrades

If you have less than 2Mb RAM you are at a serious disadvantage. Why not upgrade at this low price? These boards for the A500 Plus and the A600 plug into the Amiga's trap door connector. Built to the highest standards, they are guaranteed for a year.

Description	A600/A500+ 1Mb RAM Upgrade
AS price	A600 price £29.99
Order code	AF6H1M
AS price	A500 Plus price £29.99
Order code	AF5P1M
Special subscribers price	£28.99 each



Communicator III

Turn your CD^{32} into a CD-ROM drive. If you've got 1Mb Chip RAM and Kickstart 2 or 3, you can use Communicator on your Amiga and connect your CD^{32} with the serial port leads provided. Communicator III also includes AGA Viewer, Virtual CD and more!

Description	Communicator III
AS price	£69.99
Order code	AS505
Special subscribers price	£66.99

Personal Paint 6.1 and Personal Fonts Maker 2

Take advantage of our special AS offer and get the excellent Personal Paint, plus the bitmap font editor, Personal Fonts Maker.

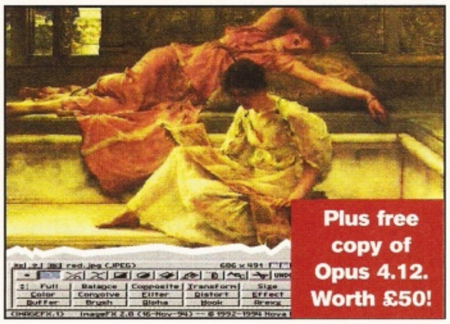


save £10

Personal Paint is a paint, image processing and animation program, an ideal graphics package for programmers and the more serious Amiga users. Personal Fonts Maker offers support for standard mono and colour fonts, as well as outline fonts and AGA screen modes.

Now you can get both these great programs for a special Amiga Shopper bargain price of £49.95.

Description	Personal Paint and Personal Fonts Maker
RRP	£59.95
AS price	£49.95
Order code	ASHPP
Special subscribers price	£46.95



ImageFX 2.1 & Opus 4.12

With its flexible interface and modular savers and loaders, Image FX is the number one force in image processing. As well as some unique features, it is simple to use.

Description	Image FX 2.1 & Opus 4.12
AS price	£144.99
Order code	AFS/IM
Special subscribers price	£140.00

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Address ____________________

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____________________ **Post Code** ____________________

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Total order		

Method of payment (please circle) **Access** **Visa** **Cheque** **PO**

Please make cheques payable to: **Future Publishing Limited**

All prices include posting, packing and VAT

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Send this form to: **Amiga Shopper, Future Publishing Limited, Freepost (BS4900), Somerton, Somerset TA11 6BR**

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* Subscribers – place a **Q** in front of your order number, please. **AMS/59**

Public Domain

Plucking the best achievements of Amiga PD programmers from obscurity, ***David Taylor*** *is here once more to bestow fame and fortune on the chosen few.*

I am glad to see that this section has been approved by the scrutinous eyes of Amiga Shopper's readers. Thanks for all your positive comments and constructive criticism – they are always welcome. Anyway, enough self-congratulation. This month's section contains a comprehensive selection taken from the PD companies who have submitted material.

Man On The Moon

Let's start off with something that gives us a pretty picture! This four-disk demo is a bit of a novelty. In reality it consists of two separate demos run consecutively.

The first part is a rendered animation with a voice over and standard soundtrack. The animation is pretty well done and is of good enough quality to have to be kept short for space reasons. I don't think it would spoil it for anyone if I revealed that it is an animation of a spaceship flying to the moon.

The second part is a more traditional demo. It has the swirling faces, et al. The good news is that it is very well done and goes a little further than just rotating boxes. All in all, this is a complete demo, but it's a pity that it comes on four disks and requires a hard drive, an AGA Amiga and 4Mb RAM!

Verdict: 84%

TurboCAT-Pro 1.2

This is a new version of the disk cataloguer that was included on our Coverdisks back in AS52. It has grown quite a bit since then and has yet more features. The program is simple to use and allows you to auto-scan your disks to build up a useful database.

The real problem with these databases is mustering the enthusiasm to use them. I know I should catalogue the disks what with all the PD lying around the office – it's hard to find anything by rummaging through a cardboard box!

If you are organised enough, then I recommend this program and also registering it.



***Man On The Moon** is an animation and a normal demo but it has high system requirements.*

For £10 you get up to six databases and more flexibility than with the PD version.

Using the program is easy – just slap a disk in the drive and you're away. It scans the disk and updates the data. I think there are a couple of areas that could be improved though, which would make this program indispensable. First, you can only scan the root directory and store the data from that. An option to scan directories and sub-directories for files and to store the information, including the hierarchy, would be

Who, what, where, when, why, how...

Product	No of disks	Type of product	Price*	Supplier	Contact	Verdict	Page
Man On The Moon	four	Demo	£3.75	Sadeness PD	01263 722169	84%	76
TurboCAT-Pro 1.2	one	Disk cataloguer	£1.50	Seasoft	01903 850378	85%	76
Aqua Sim	one	Aquarium simulator	£1.50	Sadeness PD	01263 722169	90%	77
CDP	63K	Audio CD player	n/a	aminet/disk/cdrom/	CDP_0_771.lha	85%	78
CeeD 1.16	104K	Audio CD player	n/a	aminet/disk/cdrom/	CeeD.lha	88%	78
Compact Player	126K	Audio CD player	n/a	aminet/disk/cdrom/	CompactPlayer.lha	87%	78
DC Player 1.7	23K	Audio CD player	n/a	aminet/disk/cdrom/	DCPlayer17.lha	90%	78
Digi Pix 10	two	Pictures/modules	£2 +50p	Pixel Digital PD	0151 259 4017	80%	78
InterPlay 4	AS Coverdisk	Audio CD player	n/a	aminet/disk/cdrom/	Interplay40b.lha	92%	79
JukeBox	347K	Audio CD player	n/a	aminet/disk/cdrom/	jukebox21.lha	N/A	79
MCDPlayer	68K	Audio CD player	n/a	aminet/disk/cdrom/	MCDPlayer.lha	92%	79
YACDP	117K	Audio CD player	n/a	aminet/disk/cdrom/	YACDP1.2.lha	92%	79
Vark Utils 10	one	Utilities	90p + 50p	Roberta Smith DTP	0181 455 1626	95%	79
Enlock	one	User protection	90p + 50p	Roberta Smith DTP	0181 455 1626	40%	79
Digital Utilities 2	one	Utility	£1 + 50p	Pixel Digital PD	0151 259 4017	80%	81
The Word 8	two	Diskmag	£2.50	Mon PD	01248 714591	80%	81
Sadeness Utils 1	one	Utilities	£1.50	Sadeness PD	01263 722169	95%	81
Nucleus	one	GUI creator	£8.99	Pixel Digital PD	0151 259 4017	95%	82

Some prices listed here include postage and packing charges; buying more than one disk from a PD house is likely to reduce the price per disk; check compatibility of the program with the PD House before purchasing. More information on all the PD Houses and their prices can be found in the PD Directory on the Coverdisks (see page 10), including their postal addresses and payment details.

The PD directory

On the disk

You will notice references to the PD directory in the "Who, what, when, where etc" boxout. This directory used to be printed in the mag, but had to be in very small text because of the amount of information it contained. To solve this, we have updated and recompiled the list and put it on our Coverdisks as a text file in the InformationZone.

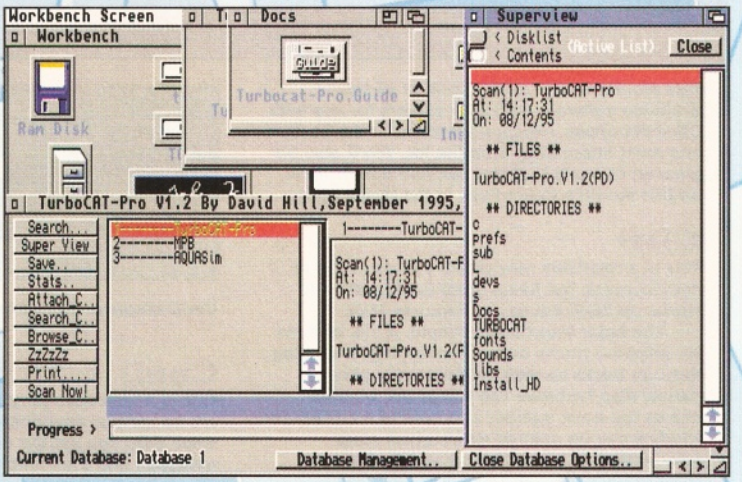
The InformationZone contains both the PD Directory and the list of User Groups (which also used to be in the issue). They are both in two formats, AmigaGuide and ASCII. The AmigaGuide enables you to point and click your way to the information, making it much easier to find the details you require. Read the ReadMe file for more information. See page 12 for details.

very useful. Also, the scanning is restricted to df0:. I'd like to be able to scan external drives too and maybe even a hard drive.

One small bug I found was that the program noticed when a disk was inserted in any drive, although it doesn't scan them, and thinks that it should try re-scanning. This causes problems if you haven't changed the disk in df0: because it tries to re-scan that and then notices that the disk is already in the database. In fact, it seems to try to scan again and throws up an error after scanning any disk – odd.

OK, it's a minor flaw and not a troublesome one and the others are possibles for future

TurboCAT Pro is a new version of the nifty TurboCAT that was on our Coverdisks back in AS52.



development maybe, but only if this program is supported well enough. So, don't delay, if you want to catalogue disks, get this, register and encourage David Hill, the programmer to keep going. By the way, thanks for the nice comment about the hair, Dave!

Verdict: 85%

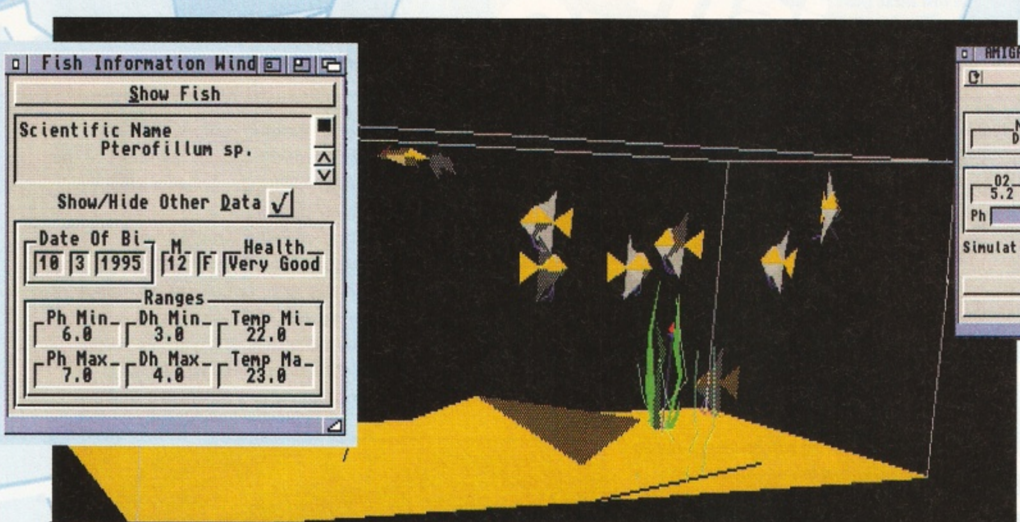
Aqua Sim

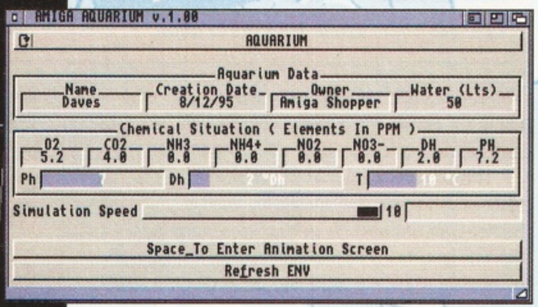
This is, er, an aquarium simulator. Yes, we were a bit surprised too. At first we thought someone had sent us, Amiga Shopper, a game. But they hadn't. In fact, this is a complex simulation of a real aquarium and requires you to set everything up, such as the amount of water, type of fish, algae levels, new water and feeding times. You have to consider elements such as water PH and the age of the fish too.

The idea is to produce a stable environment that can support life. When you have everything set up as you want, you can switch to the animation screen and see your tank with the fish swimming about.

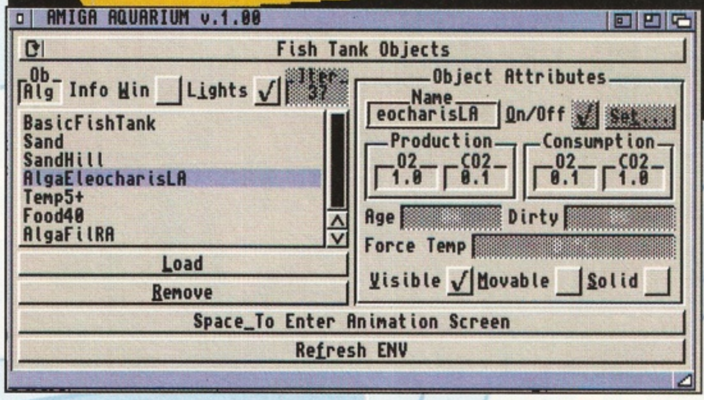
At this point, I admit that it's hard to stop grinning, because the idea of using your computer and time just to simulate a fish tank is pretty amusing. The fish are small 3D objects that simply muck about as fish tend to.

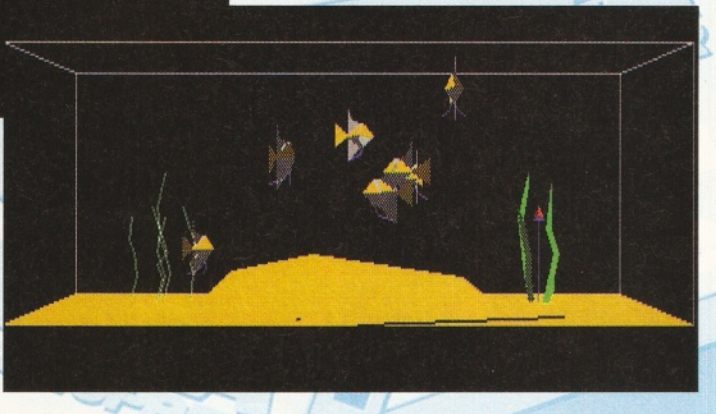
It's remarkably engrossing and had all of us enthralled. Shouts of "Go on, feed them!" from Sue and "Where's the crap plastic galleon?" from Nick. The sheer complexity of the program and the way you can set up your own





Aqua Sim is a complex aquarium simulator that requires some real concentration and dedication on your part to perfect the ideal environment for your new virtual pets.





Internet Select :-)

This month, we've taken a look at all the available software audio CD players for use with CD-ROM drives. Here's a selection of the best and most interesting from the lot. You'll also be pleased to know that you can find one of them on this month's Coverdisks in the Utility Zone.

CDP

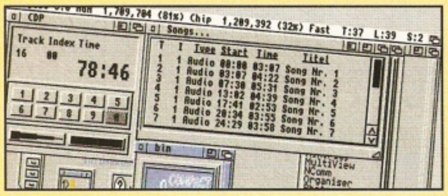
This is a relatively new player and so is still in development, but has a great deal to offer. It works on SCSI drives and requires MUI.

The basic interface is simple. It has buttons for skipping tracks or fast forwarding/rewinding through tracks as well as the normal play/pause/stop features. The top of the window shows the track number and time and a separate window can be opened which gives song information. This window shows the type of track (data/audio) and the start time and duration of a track.

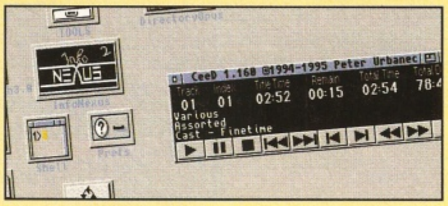
You can decide which functions you want and have just those parts of the GUI available, and, as with most MUI programs, you can iconify the program. In this state, it sits on Workbench, still working, but out of your way, while still being easy to get back. The best feature, however, is the ability to scan the SCSI devices and units from within the program. All of these can be controlled by tooltypes and CLI too.

Source: aminet/disk/cdrom/
Archive: CDP_0_771.lha

Verdict: 85%



CDP has some useful features to offer.



CeeD displays everything on one small GUI.

CeeD 1.16

This is a neat little player for SCSI drives. There are no menus; everything is available from the small GUI. You set the device and unit from the tooltypes and then load the player. The GUI shows track time, remaining time and total time.

The usual array of buttons is available and clicking on the main part of the screen makes the index file appear. Here you can easily edit the names of the CDs and the track names. Then, after saving the data, the player will recognise the disc next time and instead of showing "<Unknown CD>" will print all the information.

The archive comes with details of over 300 CDs, but you'll still want to add your own.

Source: aminet/disk/cdrom/
Archive: CeeD.lha

Verdict: 88%

Compact Player

This program looks lovely. This SCSI player has a small and tidy GUI with only four buttons – Play and Stop, Fast Forward and Rewind. You can skip tracks by clicking on the track number in the next part of the window.

The track skipping didn't react as quickly as I would have liked, but there are a couple of neat features in this player. The fonts used can be set in the tooltypes and there are also keyboard controls. So, as well as being able to point and click, you can just use the cursor keys to move through tracks or skip them.

Source: aminet/disk/cdrom/
Archive: CompactPlayer.lha

Verdict: 87%

DCPlayer 1.7

This is a very different player from the others. Firstly, it supports many types of CD drive, including CD^{32}s with Workbench and PCMCIA drives as well as SCSI. It also doesn't have a GUI. Instead, you get a small icon that sits foremost at the bottom left of the screen and moves screens with you.

The controls are via the CD^{32} joypad or emulation thereof (i.e. with a joystick). It takes a while to get used to the controls, but once you have and you have worked out how to use things like the shuffle feature, then DCPlayer 1.7 is a really original, versatile and unobtrusive player.

Source: aminet/disk/cdrom/
Archive: DCPlayer17.lha

Verdict: 90% Star buy



Compact Player offers lots, but has a few bugs.

preferences are enough to convince you that this is no game. It's a matter of life and death for poor Maria.1 and Gina.3.

There were a couple of problems, such as odd screen prefs that suddenly sorted themselves out and its refusal to recognise objects (you have to make it see all the objects to be able to pick a .aqu file, even when it is set to recognise .aqu).

The program also looks for the Aqua: volume, but you just have to rename the disk and it also requires MUI. This is a must, if only to see it for real. Keep it around to baffle friends at the insanity of it all.

Verdict: 90% Star buy

Digi Pix 10

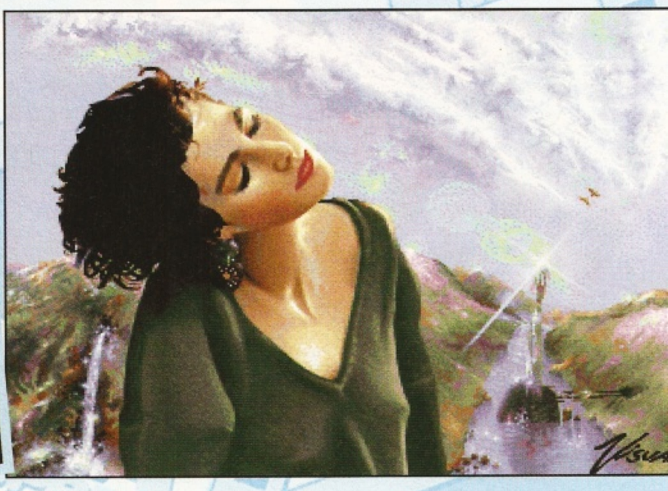
Another set of pictures and modules coming on two disks and including a real mixture. From the pictures, there are some original and talented pieces – and some tedious reworkings that, while better than I could ever do, fall short of the quality of the better offerings. There's also an adequate selection of modules.

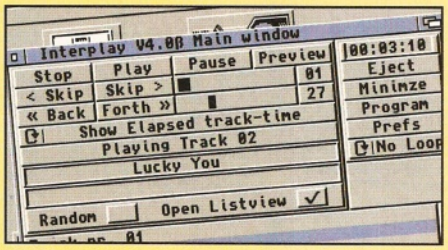
The front end has been created with Nucleus (reviewed this issue in the Licenceware section on page 82) and is really good. It is a testament to the power of Nucleus that a front end can be drawn like this, and yet not suffer from large time delays or massive memory overheads. The pictures are all shown quickly



Digi Pix 10 offers some really talented work – here's a selection including a nice girl – because we can.







InterPlay 4 has it all and more besides.

InterPlay 4

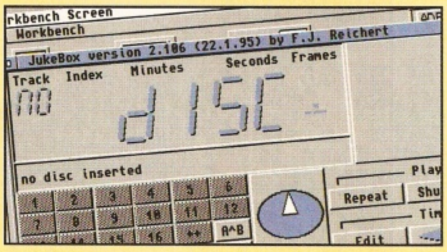
InterPlay is one of the Rolls Royce's of CD players. This new version has more options than Cadbury's (that's a reference to their low calorie chocolate drink, BTW). It works with most types of CD drive including the Overdrive-type PCMCIA drives and SCSI ones.

With the CD volume mounted, you just load Interplay. The interface offers everything. You have all the buttons you'd expect as well as the chance to put in the details of the CDs. These Interplay lists are stored in your S: directory, and there is a separate program out that allows you to merge two CD lists.

The Preferences part of the program allows you to set many options, such as auto-playing a CD on insertion or actually stopping the CD motor. You can program the order of play and even save your selection so you can reload it. This is a beta version and it did lock up once or twice, but it has so much to offer that it is a clear contender for best player. When the 4.1 version is released, it will probably be unrivalled, but until then you can content yourself with this version, which is on this month's Coverdisks.

Source: aminet/disk/cdrom/
Archive: Interplay40b.lha

Verdict: 92% Star buy



JukeBox could have been super. Had it worked.

JukeBox

JukeBox should be an excellent player. It has masses of buttons on the interface and allows you to change SCSI devices from within the program. Unfortunately, it seems to have a few problems. First, it was the only CD player that couldn't play from my drive and second, it seemed to get caught in some form of loop, because the amount of RAM (of which it grabs too much) continually fluctuated and the whole machine suddenly became sluggish. It's a real shame, because if it worked properly, JukeBox would be excellent. You may want to try it for yourself to see if it works with your drive.

Source: aminet/disk/cdrom/
Archive: jukebox21.lha

Verdict: N/A

MCDPlayer

MCDPlayer is one of my favourites and is the one that I keep on my drive, along with Interplay. It's small and simple, yet offers many features. All the controls are there as well as the chance to edit the list of CD titles and program the play order. This is the only release of the program that will be made according to the author, so don't expect any updates, but it's so good, why would you want any? The tooltypes allow you to set the fonts and the drawer for the songs information. This is a CD player with lots of frills and none of the fuss.

Source: aminet/disk/cdrom/
Archive: MCDPlayer.lha

Verdict: 92% Star buy

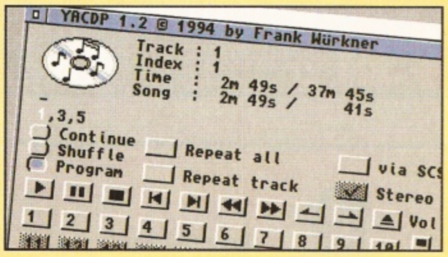
YACDP

This player has been around for some time and is often supplied with CD software. It is one of the simplest players to use and yet has the ability to play most SCSI drives. In fact it is probably the best player to have around as a backup because you can almost guarantee that it will work.

In addition to the ability to changes devices, units and luns, you can program or shuffle the tracks. You can program the track details, and although the interface looks little more than functional, it shows everything you need. You can also adjust volume and balance. YAC is as good as ever.

Source: aminet/disk/cdrom/
Archive: YACDP1.2.lha

Verdict: 92% Star buy



YAC is still one of the best audio CD players.

and this makes the latest Digipix a most acceptable slideshow-cum-music disk.

Verdict: 80%

Vark Utils 10

Yet another disk compiled by the conscientious Vark No 10. Like the others this is autobooting and has a set of menus to give you a quick idea of what's available.

There are around 20 CLI commands, plus others things like a new serial device and a C64 emulator. The programs range from the genuinely useful, like the modem charge calculator, to the nice hacks, like the one to display RAM at bootup, which is cool.

To ensure as much as possible has been crammed on here, the programs have been packed with Stonecracker and the docs are powerpacked (why doesn't someone write a text viewer that can handle Stonecracked text files?).

Most people will find a couple of programs on Vark Utils 10 that they will be pleased with, but remember that it is a disk aimed at CLI m m users, so if you're not too nifty with Shell, it might be intimidating. It shouldn't be, because all you really have to do is boot the disk and type the name of the program.

Verdict: 95% Star buy

Enlock

The most annoying thing about this program is that it looks really good and works really well. Indulge me; allow me to explain.

Enlock is a program to user-protect your hard drive, allowing multiple users over whom you have the powers of a god. Well, you can restrict access, limit drive space, etc. You have the ultimate password and can do what you like. The interface is rather neat and the executable part gives a cool animation requesting the user name and password. OK, at over 100K, it's a bit large, but it's pretty neat.

The problem is that Enlock comes with an install script using the standard installer. This works fine, until it checks to see if you are registered. This should work, but it isn't. If you're not registered, then the script bottoms out because it can't find the keyfile. It's supposed to continue and finish the installation, but with some options missing. However, you end up with a half-installed hard drive password system, which you have to manually de-install, because the de-install script won't work unless you have booted from the hard drive. De-installing is easy enough when you work out what has been done.

I'm not going to say what exactly needs doing, because this program is very nice and it would be a shame to give away its secret. Suffice it to say that Enlock would keep novices from messing around, but can easily be worked around by those with some knowledge of how the Amiga works. If the installer problem is sorted out, then this is going to be a nice, if a bit low-end, addition to your drive, but until then avoid it. It's not worth the hassle.

Verdict: 40%



Enlock offers a lovely animated start to password protection, but it has problems.



Digital Utilities 2 has some great utilities to offer. ANSI-Draw allows you to paint pictures with words, if you see what I mean.

Digital Utilities 2

Here's a disk with a couple of good utilities on it. One of them, AmigaStart is for displaying a picture with system information superimposed on StartUp. This is a good program, that was included on our Subscribers disk a couple of months ago. The other one that really deserves a mention is ANSI-Draw, a program for creating pictures using ANSI characters. This is, for those who've never seen them, for displaying "pictures" or adverts on bulletin boards.

The program is pretty powerful and is a must for BBS owners as well as anyone wanting to incorporate these sorts of pics into documents. It would have been even nicer if it had incorporated the importing of IFFs, but this is planned for a later version.

There are another two utilities on here, one of which is for Blizzard owners, but I can't work out what it is supposed to do, because the document is downright strange, but it's to fox some sort of bug involving fastmem on Blizzard 1220s. The other, CBS, is equally baffling.

Verdict: 80%

The Word 8

Word! Probably best expounded for a joke in Lethal Weapon 3. The Word. A truly awful ex-TV program made so bad by a thoroughly annoying presenter. The Word 8. The latest issue of the diskmag from NFA. And this issue is much the same as the last one.

Now, there's no point pretending that piracy doesn't exist, and in fact I'm planning an article about it, but there's a limit to levels of acceptance. This issue pushes its luck. Some of it is about how people are deciding to stop pirating – how very commendable.

The truth of the matter is that piracy is killing the Amiga. Developers who have ditched the Amiga haven't done so because it isn't good enough – there are enough Amiga users still around. They have done so because they can make more money on platforms considered safe from piracy, such as the PlayStation.

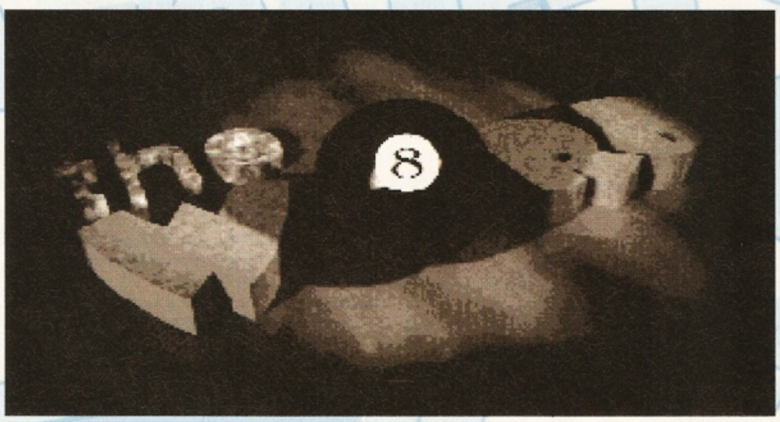
Without software support, no computer can survive and the Amiga is no exception. Only when developers see an up-turn in sales will they put money into research and development. So, put simply, stop it and stop writing any "positive" points about piracy in diskmags. It might be cheaper, but not if you have to get a £1,500 PC because the Amiga dies.

Enough rant, the rest of the mag has some good stuff. There's general bits including film reviews (OK, they're out of date now, but it's interesting to see other people's opinions). There's a possible plot for the next Star Trek film that's very good. There's a useful guide to the screen alerts that you get on boot up. In other words, there's plenty here to keep you reading and enough diverse stuff to interest everyone and thankfully it's not nerd-orientated, so you don't need an anorak to read this!

The Word exudes a genuine feeling that it is compiled by Amiga enthusiasts who have a life too! I don't think the content is quite as good as their last issue, but it's not bad and it's still worth reading.

Take everything I said about the last issue and add these comments and you know what you're in for. I've also deducted some points for the illegality of some of the articles. Hmm, that last sentence is going to encourage more of you to buy it instead of the reverse, isn't it? Tuh, honestly, why do I bother?

Verdict: 80%



The Word 8 is a pretty slick diskmag, but it should really review its content.

Sadeness Utils 1

Another tough call, this disk. It includes some of the best utilities of recent months and is, as such, an immediate Star buy. The downside is that for regular Amiga Shopper readers, the disk has some of its appeal lost because many of the 10 programs have been included on past AS Coverdisks.

There's PDBase, the excellent database designed to help you keep track of all your programs. The good thing about that program is the way that associated programs can be linked. So an entry of Interplay, for example, can include a reference to the separate Interplay list editor.

PicView is an excellent picture cataloguer which provides thumbnails of each picture. Then there's the neat WBExtender, which gives you a better Workbench bar and About requester. MultiCX is a commodity that offers lots of features like mouse acceleration and screen blanking.

WSpeed is a different speed tester that allows you to test your Amiga's graphics handling speed and compare it with that of other Amigas. Other programs, just so you know, are Smartcacher, Multi File System, PicBoot, Sysihack and Magic Colours.

A brilliant compilation of handy utilities, but, as I say, probably best for those who don't take advantage of our Coverdisks every month.

Verdict: 95% **Star buy**

PD submissions

If you have some exciting PD disks that you would like to be considered for inclusion in PD Select, send them in to:

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If you are the author of the program, state where people can get your program from, and whether you would like us to consider it for inclusion on a future ShopperChoice Coverdisk.

Licenceware

This month I'm taking the opportunity to focus on one program in particular, so apologies to those that we haven't included – we will feature them next issue. This time though, prepare to be bowled over by Nucleus.

Nucleus

Creating your own front end for a disk may sound like the sort of thing only open to programmers. There have been programs before that offer some control for novices, but they are simply text-based menu systems. Others offer more flexibility, but at the price of accessibility. Nucleus brings the Amiga the easiest way to create a front end quickly and ensures a stunning result.

Everyone compiles disks. At some point, you start to think what a good idea it would be to put all your favourite utilities on one disk. Then you decide you'd like it to have some sort of boot screen that would introduce it and maybe a menu of some sort, but the best you can manage is a utility that adds names of programs. I'll be honest, the reason I've kept the Coverdisk front end to a minimalist shell is because of the hassle involved in creating a new front end every issue. Nucleus changes everything so don't be surprised if the Coverdisks get an overhaul next issue.

Nucleus requires Workbench 3 (although a Workbench 2 version is being worked on), but the screens you create run properly on Workbench 2 and above machines. So, although you need to use a WB3 machine to create the front ends, they themselves can be used on anything from an A500+ up.

The program could not be easier or quicker to use. You load it and define the screen or window you want, including size, resolution, gadgets (e.g. resize gadget) and colours – all through a simple GUI. Then go to the edit window and you have a blank screen. This is quickly rectified by selecting an IFF picture as a backdrop and placing it on the screen.

Now it's time to add some gadgets, which will be the buttons you click on to interact with the screen. There are two ways of doing this, selecting the text gadget or the image gadget editing from the menu. This selects whether the box you draw will contain text or a picture. You size the box and place it where you want and then either select the font and enter your text or choose a picture. You can also choose how the button appears and how it alters when it is clicked on, you can even change the image between active and inactive.

Bang! Five minutes gone and already I've got a screen with a load of text and buttons on it, looking pretty with pictures et al. All that remains to be done is to associate some actions with the buttons. Again the GUI makes this a doddle. I can select a program I want to launch or an AmigaDOS script I want to run, decide whether it should be done behind Nucleus' screen or whether Nucleus should quit before running it or if it should simply iconify. I can, in essence, do anything I damn well want. Are you starting to understand why I am so excited by this product? I can create, from scratch, an executable interface that looks totally professional in under an hour.

The real beauty is that the backdrops, images and buttons can be made from IFF pictures and brushes, which means that you can use a separate paint package to do all the creation. This is sensible, because rather than try to incorporate all the features that a flash paint package has, the programmer lets you take advantage of those features (let's face it, everyone has a DPaint or similar) and then use Nucleus. Even if you are an artistic no-hoper, you can create stunning effects. All you need to do is screen-grab something that you like and cut out the button you want (copyright excepting, of course).

The projects can then be saved out as either composites (i.e. a script containing all the data from the screen, so that you can load it back in and make changes), or as executables. The executables can be quite large. Thankfully, the author has resisted the temptation to include packing options, because the results would have been less than can be achieved (like the packer included in AMOS). This way, all you need to do is pack it yourself with the likes of Stonecracker. Hence I have a full 16-colour front-end screen complete with buttons packed down to an astonishing 14K. It's a bit like Can Do, but with executables small enough to be viable.

The news just gets better though, because the author has already set to work on another version that will offer even more – allowing you to create your own personalised file manager even. Things like ASCII importing, image scaling and module inclusion are possibilities. How about the ability to include IFF animations in windows, which would let you have spinning logos or scrolling text, or the playing of a sample when the button is clicked? OK, we're getting ahead of ourselves, but the possibilities are limitless.

Until the next version is completed, you can still create masterpieces with this one. Do not wait until the next version is released, because a date isn't yet known, and the more support this version gets, the more likely development is. Buy this now! Don't let another talented Amiga programmer become disillusioned and abandon our machine.

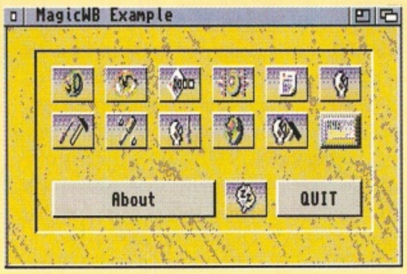
If you think I'm exaggerating, then consider this: I have shown this to everyone passing through the office and they have all, and I mean all, been mightily impressed. Only the Amiga makes it possible.

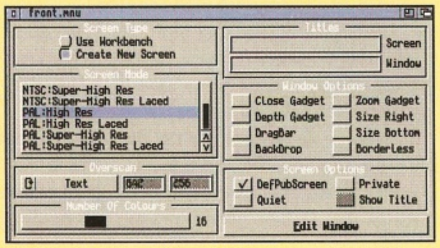
Hmm. I can see you're still wavering. (Dave goes off to phone Pixel Digital). Right, we've secured a special deal for you that will save AS readers £6 off the £15 retail price and includes a printed manual – now for £8.99. All you have to do is tell them that we sent you when you order the program. Please makes your cheques payable to J. Close, not Pixel Digital PD! ■

Save £6!



A full screen example of Nucleus' results and a pseudo window with icons.





The Nucleus set up screen offers plenty of options and is very easy to use.

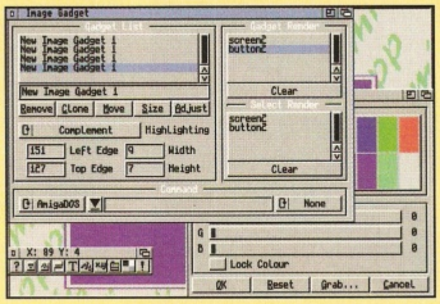


Image gadgets can be easily added as buttons.



One of the PD titles already uses Nucleus.

Verdict: 95% **Star buy**

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Talking shop

This month in Talking Shop: Confusion at Escom stores; Blitz BASIC support; virus problems; five readers win a copy of Wordworth 5; the new Amiga Technologies monitor and more!

Some readers have had strange and rather disturbing experiences in Escom stores recently. Two of the letters we received from you are printed here. We talked to Amiga Technologies to find out why the service you received from Escom staff was so poor. If you turn to our news pages this issue you will find Jonathan Anderson's reply.

Escom disservice

£25 Winner

I do not very often write letters to magazines, but an experience that I just had in the Bury St. Edmunds branch of Escom has stirred me into doing so.

The A1200 bundle in the window caught my eye so I thought I would pop in and see it running alongside the PCs. Surely they would have a HD version of the 1200 up and running showing what it is capable of? Er no, just a stack of three boxes with a price on top. Never mind, I'll speak to the assistant (rather senior-looking compared to the other three) and the conversation went like this:

Q. Excuse me, will you be stocking the Amiga 4000 and if so when do you expect to have them by?

A. The only ex-Commodore machines that we plan to stock are the Commodore multimedia PC and (pointing to the pile) the A1200, although I try not to laugh at those.

I was so stunned I did not know what to say, so I mumbled something about my expanded 1200 putting the average PC to shame and then left.

What is going on? If this is the attitude of people selling the machine it quite simply will not sell.

I really hope the Amiga survives and I thought Escom/ Amiga Technologies were headed in the right direction. The price for the 1200 isn't very far out when you look at the software bundled with it, but I think they should have insisted on a HD in every machine. However, if my experience was anything to go by, I don't think it will matter much in the end.

Mr. Karl Rose
Bury St. Edmunds, Suffolk

Subjects of interest

In our Christmas issue news pages, we asked you to write to Petro Tyschtschenko at Amiga Technologies to tell him what you want from your machine. But we also want you to write in and let us know too.

We want you to tell us what you think of Amiga Technologies, the Amiga Magic pack and the software bundled with it.

We also want you to tell us what you would like to see featured in Amiga Shopper. If there is any Amiga software or hardware that we haven't covered in the magazine, but that you would like us to review, then let us know! And if there are any tutorials or features you would like to read – tell us!

It is only when we get lots of feedback from you that we know that we are covering what you want to read.

You can contact us by E-mail or snail mail at the address in the box opposite.

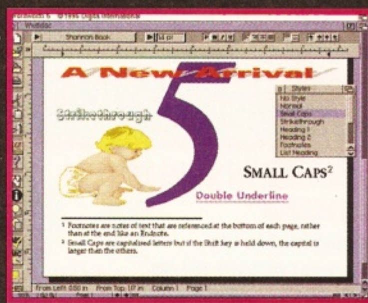
For those of you who missed Petro's address, here it is again:

Petro Tyschtschenko,
Amiga Technologies GmbH,
Berliner Ring 89,
D-64625 Bensheim,
Germany.
Fax: +49 6252 709 520E-mail: gbo@amiga-tech.de

Wordworth 5 winners!

Five readers had the chance to win a copy of Wordworth 5 in the competition we ran in our Christmas issue. The five winners are:

- **Roberto Colombi from Newcastle-upon-Tyne**
- **Mrs. M. Walker from Wiveliscombe in Somerset**
- **Michael Cavers from Duns in Berwickshire**
- **Mr. K. Taylor from Weston-super-Mare**
- **Derek Walker from Glasgow**



If you didn't win this time, don't despair! Turn to page 46 where 10 readers have the chance to win 5 CD-ROMs each.

What's going on?

I was in my local Escom store the other day having a look around. I was delighted to see the A1200 back on sale but I was surprised to see only a collection of empty Magic pack boxes and no machines on display. I asked a woman behind the counter if they would be stocking the A4000T and the reply was more or less: "Don't expect to see any in here, but you might like to try Silica or Dixons." I was stunned, I had just been to Dixons and saw no Amigas at all.

Worse was yet to come. I carried on having a look around when I overheard a youngish man asking about the Magic pack. He asked if the Amiga was any good. The reply from the salesman was: "Don't get me wrong, it's a great little computer, you can play games on it, you can word process and draw on it, but you would probably grow out of it pretty soon. Now our PCs however are much more powerful and would last you much longer."

The guy shrugged his shoulders and walked over to the Pentium PCs.



Can you trust the man from Escom to help sell the Amiga?

I nearly fell over. It sounded like the salesman was actually talking the man out of buying an Amiga. What is going on? I thought Escom were pushing the Amiga like mad. I must have thought wrong.

On a different note, I read on Teletext that Amiga Technologies had chosen the Power PC 604 chip to power the new RISC Amigas. Is this true, or just another rumour? I had read an IRC chat with Dave Haynie and some other ex-Commodore employees a while ago, in it they said they preferred the HP-PA RISC chip to the Power PC. Why have Escom chosen the Power PC? How is the Amiga OS replacement project

How to contact us

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All the letters received at these addresses will be considered for publication, unless you specifically advise us otherwise.

going? Is it near completion or has it been scrapped? It would be nice if you could do an article on it sometime.

John Alcock
Rotherham, South Yorkshire

Unfortunately, we have received several letters like these two from people who have had similar problems with the staff in Escom shops. I talked to Jonathan Anderson of Amiga Technologies and asked him why it appeared that Escom hadn't briefed their staff about the Amigas. He wasn't at all happy about the problems people have experienced. Read his reply on page 14.

You would have thought that enterprising Escom staff would have got hold of a few copies of the Amiga magazines to find out what the machines are all about anyway.

As we said in our news report last issue, the next generation of Amigas will be based upon Motorola's PowerPC processors. We will bring you more information as and when we receive it and of course we will review the new machines as soon as they appear.

Foxed again?

Virus Checker version 7.17 found the Ultra Fox virus on two of your Coverdisks! This filevirus is present in four files on two disks. You must have noticed this and I'm surprised, if not to say annoyed, that you did not inform your readers about it in recent issues.

In case you don't know already, I'm listing the four files to which the Ultra Fox virus is attached (if Virus Checker is correct):

Amiga Shopper 54:
`MRBACKUP/DOCS/COMPRESSOR.DOC.INFO`
Amiga Shopper 54:
`MRBACKUP/DOCS/CHANGES.INFO`
Amiga Shopper 52:
`DATATYPE/DEVS/DATATYPES/BITMAP FONT`
Amiga Shopper 52:
`DATATYPE/DEVS/DATATYPES/OUTLINE FONT`

Dick Waanders
Netherlands

Annoyed, eh? I'd be pretty bloody annoyed if a virus did get on to the Coverdisks. I always have a checker running and also test the disks out with Antivirus as well as other programs. I wouldn't say it was impossible for a virus to get on a Coverdisk, because it did happen once (not on any of our disks, but on one that was amusingly nick-named Virus User International – this, I hasten to add, was well before I worked there. Damn, I've given away who it was now)!

Anyway, the Ultra Fox virus is a bootblock virus and therefore could not infect a .info (icon) file. In fact, no virus could. Viruses are only attached to bootblocks or executables, although there is talk of a new type appearing on other platforms which can be incorporated into documents.

If you read the documentation for Virus Checker (there's a new version on this month's disks), you'll see that it had problems with mistakenly throwing up Ultra Fox warnings. It's good to know that you are rightly cautious, but we're right and you're wrong – so there!

We ran a feature on viruses and how to prevent them in our Christmas 1995 issue – if you missed it call ☎ 01225 822511 to order a back issue. ***Dave***

Thanks for the memory

I'm glad to see you've created an ftp archive, I think it's a great idea, my only complaint is that you don't include the ordinary PD programs, only the ones from Aminet, which is a bit silly considering anyone on the Net can already download them. It would be much more useful, especially for people



Read the Virus killer feature in our Christmas 1995 issue.

outside the UK, to include all the PD you receive each month as many of these programs aren't actually on the Net.

Still on the subject of PD, could you please state clearly in all the reviews whether the program is free or Shareware and if so how much is registration, etc.

Anyway keep up the good work, the magazine looks great, although it has got a little slim over the last year or so. If paper costs are prohibitive, I don't think people would object to smaller print if it meant more detail and articles.

Fergal Daly
Dublin, Ireland

We are looking at extending the ftp archive, but there are problems attached to including all the PD section there. Some are titles that are exclusive to certain houses and others are disks that have been completed or compiled by PD Houses, which become their copyright. We could try and track down all the archives on Aminet or boards, but as you point out, readers can do that themselves.

We want to provide an archive that is select and provides the cream of the cream, not just everything, or we might as well become an Aminet mirror. As to the registration fees, I try and mention them whenever I remember! ***Dave***

Welcome praise

You want some feedback on the Public Domain section (subscriber newsletter, AS56)? Well, here goes. Marvellous, stupendous, fantastic, innovative, interesting, comprehensive, informative. Which of these adjectives should I use? I know, I'll use 'pretty good'. Plus all of the above.

The information panel is a great idea, providing at-a-glance all the details anyone could want regarding each of the programs reviewed. It's certainly quicker than flicking through every page of the PD section in half a dozen Shoppers, looking for a particular program that has recently been given the Dave treatment.

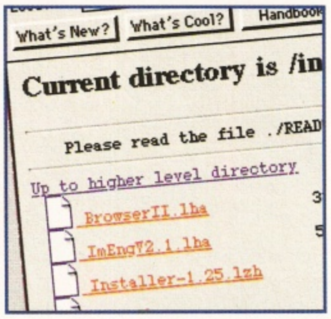
Personally, I only ever use one PD company (and then mainly for PD CDs), but the panel is a handy reference source as I await the appearance of selected titles in their library. And the mention of CDs brings up another point – if you could see your way clear to devoting a little more time and space to increasing the number of reviews, I'd be ever so pleased.

Graeme Goodes
St, Albans, Australia

Since we revamped the PD section of the magazine, we have had lots of readers complimenting us on the new style. We are very pleased that you find it useful.

Picture imperfect

First of all, I have just tried out the new Amiga Technologies monitor, and it's terrible. There is no horizontal adjust on it, which means that the picture has 1 inch on either side of the picture that is not used. What a waste. There is



Amiga Shopper's ftp site on our FutureNet pages (see page 69).

however a vertical adjust, but you really need to be able to adjust them both. The corners of the monitor are rounded like on a Mac's, but too much of the picture is lost, as the corners are too big, if you see what I mean.

I was looking Computer Shopper for monitors, and I have spoken to a few companies. There is a possibility that there are



We reviewed the new Amiga Technologies monitor last month.

monitors that cover all the frequency ranges which are required to play games (isn't Worms brilliant).

Apparently they are broadcast monitors, which sync that low to accept a TV signal, but come with a standard VGA connector and SVGA support. At the moment I don't know any more, except that a 28-inch (yes, 28-inch!) one costs approx £560 + VAT. I'll send you more info when I get it.

By the way, how about a feature on how to install an external SCSI hard drive into a PC case using Squirrel. Build your own PowerStation I suppose. There are 1Gb hard drives in Computer Shopper for £199 + VAT (yes, they are SCSI-2), and cases start at £29 + VAT.

Richard Thomas
Herne Bay, Kent

I don't think its fair to say that the Amiga Technologies monitor is rubbish. We reviewed it in our last issue and although it didn't get a Star buy, it received a respectable 75 per cent. David was using it for a while in the Amiga Shopper offices and was very reluctant to pack it up and send it back! It does have its limitations, however – it really all depends on what you need your monitor for.

Check out our monitors Supertest back in our November issue for more buying advice. (If you missed it call ☎ 01225 822511 for a back issue.)

By the way, I totally agree that Worms is an excellent game – I particularly enjoy lobbing grenades at Nick and Steve from Amiga Format.

Support for Blitz

I am trying to put together a Blitz support group, and would like interested users of Blitz BASIC to give me some support and ideas. Blitz users interested can write to me at: 27 Hillside Avenue, Worlingham, Beccles, Suffolk NR34 7AJ. Please enclose a self-addressed, stamped envelope to receive further information.

Matthew Tillet
Beccles, Suffolk

We will be running a six-part BASIC tutorial when our AMOS one finishes – starting in our May 1996 issue. ■

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Piracy

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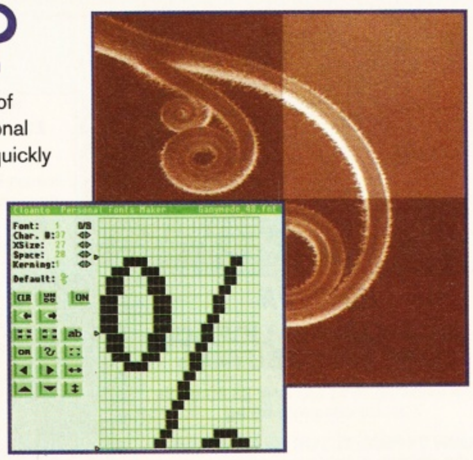
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There will also be a selection of fonts from the professional Kara Collection. And a demo of the brand new sample package, Aural Synthetica from Blachford Technology, makers of Aural Illusion.

They'll also be the full Licenceware package, Dialogue Procedures, for AMOS users and an exclusive, fully functional demo of Nucleus. Of course, that's not all either. We'll also have... well, you'll just have to wait and see.

Reviews **special**

The AS offices are overflowing with new products at the moment. Next month, instead of the usual Supertest, we'll be packing the issue with reviews of the latest releases. They'll be Datastore 2, Digita's friendly database, a brand new professional audio mixer from Harman, SyQuest's new EZ135 drive, Main Actor Broadcast, a revolutionary 3.5-inch hard drive, Digital Universe and Money Matters 4. TurboPrint 4.1 also comes under the AS microscope and we'll have an exclusive review of the Siamese System from HiQ. Don't miss it!

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CIA 8520A I/O controller	£18.99
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SupraFAXModem

SupraFAXModem 288
- Up to 115,200bps (v42bis)
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- V34 Standard
- NComm Software
- Class 1 & 2 Fax
- Unique LCD Display
- Flash ROM
- 5 Year Warranty

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This modem has full 14400 baud. includes V.32bis, V.32, V.22bis, V22, V21, MNP2-5, V.42, V42bis, Class 1 & 2 commands, 9600/14400 Group 3 Fax. Includes free modem comms (not Fax)s/w & cable
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Supra modems are not BABT approved, however they perform as well & often out perform BABT approved modems. Supra Modems have a 5 year limited warranty

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WE ARE PREFERRED USR DEALERS

Sportster 288 only £193.99
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If you thought V32bis was fast try V34 (28,800 bps).

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33,600 bps.

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The amazing new graphics tablet for the Amiga developed with First Computer. 94% rated in Amiga Shopper. Requires 2.04 WB or above.

Scanners

Power Scan v4. £89.99
256 g/scale on AGA Amigas, 64 g/scale non AGA

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24 bit colour scanner, 16.7 million colours

Alpha Scan 800 £99.99
800 dpi, 256 g/scale, works on all Amigas

Alpha Scan 256 £139.99
256 g/scale, full OCR software, HD req to use OCR

Epson GT 5000 £439.99
Colour flatbed scanner Parallel interface built in.
Art Department scanning software, price £99.99

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New!! 17 Bit The 5th Dimension	£17.49
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Weird Science Clipart	£8.99
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New!! World Info 95	£34.99
New!! XiPaint V3.2	£49.95
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Canon BJC70Colour — Portable colour printer, 30 page ASF.	£289.99
Canon BJ200ex — High quality mono printer, virtual 720 dpi.	£207.99
Canon BJC4000Colour — High quality colour/fast mono printing 360 dpi.	£289.99
New!! Canon BJC610 — Enhanced colour printer, virtual 720 dpi.	£410.99
Canon LPB460 Laser — GDI printer, 4 p/p/m, HP Laserjet II emulation.	£369.99

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Star LC90 9 pin mono — ASF built in, push tractor optional.	£107.99
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Star LC240 24 pin mono — 192 cps draft, with ASF built in.	£123.99
Star LC240C 24 pin Colour — ASF built in, 4 LQ fonts.	£145.99
Star SJ144 Colour — Colour thermal transfer printer, low running costs, 3 p/p/m mono, 1.4 p/p/m colour.	£229.99

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Simple (as easy as ABC) to use 24 pin printer. Comes as standard with 50 sheet Auto sheet feeder. Tractor feed optional at £34.99

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- New Micro Dry print technology
- 600 dpi Colour/1200 dpi mono
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HP 660 Colour — New colour inkjet from HP.	£319.99
HP850 Colour — 600x600 dpi up to 6 p/p/m mono, 3p/p/m colour	£429.99
HP 5L Laser printer — 4 p/p/m 600 dpi	£449.99
HP 5P Laser printer — 6 p/p/m 600 dpi	£715.99

EPSON

Stylus Colour II — 720 dpi, 4ppm Black, 2ppm Colour.	£335.99
Stylus Colour IIs — 720dpi, 2.5ppm Black, 1ppm Colour.	£270.99
Stylus 820 — 720 dpi, 2.5ppm Black, Colour Upgradeable.	£234.99
Stylus Pro — 720x720 dpi, Photo-Real quality output.	£499.99
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The perfect accompaniment for a high quality colour printer
NEW!! GT-5000 colour flatbedscanner ONLY!! £439.99

We would be happy to quote you on any make or model of printer that may not be listed.

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1.8 Metre printer cable	£4.99
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5 Metre printer cable	£8.99
10 Metre printer cable	£12.99
Parallel port extension cable	£9.99

Consumables

Ribbons

Citizen Swift/ABC mono	£3.99
Citizen Swift/ABC colour	£12.99
Star LC90 mono ribbon	£4.99
Star LC10/100 mono	£3.69
Star LC10/100 colour	£7.99
Star LC240c colour	£13.99
Star LC240c mono	£8.99
Star LC240 mono	£5.99
Star LC24-10/200/300 Colour	£13.99
Re-Ink Spray for mono ribbons	£11.99

We stock a wide range of consumables for all printers Lasers, Dot Matrix and InkJets old and new.

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Save a fortune in running costs with your ink/bubble jet. Compatible with the HP Deskjet series, Canon BJ10/20/80/130/200/300/330, Star SJ48, Citizen Projet and many others.

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Bulk refills	(125ml)	£24.99

Printer repair specialists call for quote

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Canon BJ10/Star SJ48	£19.99
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Canon BJ30 (3 pack)	£13.99
Canon BJC 70 mono (3 pack)	£12.99
Canon BJC 70 colour (3 pack)	£16.99
Canon BJC 4000 colour (single)	£16.99
Canon BJC 4000 mono (single)	£7.99
Canon BJC 4000 mono high cap.	£28.99
Canon BJC 600e mono high cap.	£10.49
Canon BJC 600e colour	£8.99
HP.Deskjet colour	£26.99
HP. Deskjet double mono	£24.99
HP. Deskjet 660 double mono	£25.99
HP.Deskjet 660 colour	£27.99
Epson Stylus mono	£15.99
Epson Stylus colour	£36.99
Epson Stylus Col. II/S/820 Mono	£17.99
Epson Stylus Col. II/S/820 Colour	£24.99
Epson Stylus 820 colour upgrade	£94.99
Star SJ144 mono/colour (single)	£8.99

Covers

All printer dust covers	£5.99

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Fanfold (tractor feed) 500 sheets	£4.99
Fanfold (tractor feed) 1000 sheets	£8.99
Fanfold (tractor feed) 2000 sheets	£17.99
Single sheet 500 sheets	£4.99
Single sheet 1000 sheets	£8.99
Single sheet 2000 sheets	£17.99
Epson Stylus 720 dpi paper pack	£12.49

Disks

Bulk DSDD
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30 x £9.99 200 x £54.99
50 x £15.99 500 x £118.99

Branded DSDD
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30 x £12.99 200 x £63.99
50 x £25.99 500 x £142.99

Bulk DSHD
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30 x £11.99 200 x £59.99
50 x £17.99 500 x £134.99

Branded DSHD
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30 x £15.99 200 x £84.99
50 x £25.99 500 x £190.99

Disk labels x500 £6.99
Disk labels x1000 £9.99

Shopper**disks**

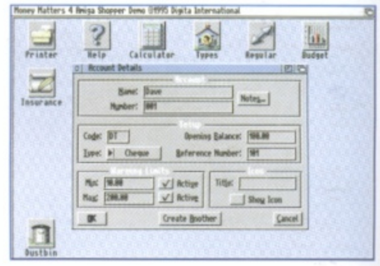
Cooler than cool, these disks will bring you all the street cred you want as well as 5Mb of commercial demos, Licenceware, applications, utilities and much more besides.



Money Matters **4**

New from Digita, we've got an exclusive time-coded version that will allow you to try out the full version of Money Matters 4 for three months. It is the essential package for those who want to keep track of their finances.

Offering everything from savings or cheque accounts to credit cards, investments and insurance, there's no aspect of personal and household accounting that can't be mastered and budgeted with Money Matters 4.



Pro-Lottery 96



The National Lottery is a game of pure luck – so you've got as much chance of winning as anyone. Pro-Lottery 96 is the new program from Ali Prior which allows you to take advantage of all types of prediction techniques and test its numbers against those picked. This is an exclusive version for Amiga Shopper and it is fully operational until mid April.



Shopper**Choice**

Amaze your friends; placate your enemies. ShopperChoice could be the answer to your problems.

Utility**Zone**

As unmissable as ever, this month's zone has three brilliant programs. There's Virus Checker 8, the new version revealed in AS55 and InterPlay 4, the most feature-packed CD player ever. There's also Icon Convert, a useful icon tool.

Technical**Zone**

Another three Shell programs to help you get the most out of your Amiga, including Clip Handler, which allows you to cut and paste within Shell windows.

Magic Paint Box

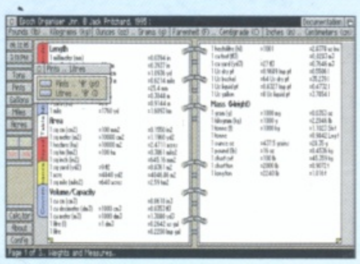
Since giving this Licenceware package 96 per cent in AS55 we've been hounding F1 to create a demo for us. Here, at last, is our exclusive demo which allows you to play around with many of the program's features, including the grass growing tool. Don't let your kids have a go – you'll never get back on your Amiga. Believe the hype.



Application**Zone**

Epoch Organiser

Another exclusive, this new organiser from Jack Pritchard's Epoch range couldn't be easier to use. Set out like a Filofax, it's a prime example of the quality of today's programmers.





QuickFile 3

A point and click mouse controlled database with mountains of features, including incorporating pictures inside the database itself. Excellent.

Morse Code Trainer

As promised last issue, this Star buy winner is here on the disk. It offers tutorials at different speeds and a freehand mode. It's the complete Morse Code teacher.

Plus: ProgrammingZone with tutorial code and InformationZone with PD Houses and User Groups.

